

3

TRANSLATE

Context analysis
Site analysis

translate *vb* to interpret or infer the significance of;
to transfer or convert

3.1_Context Analysis

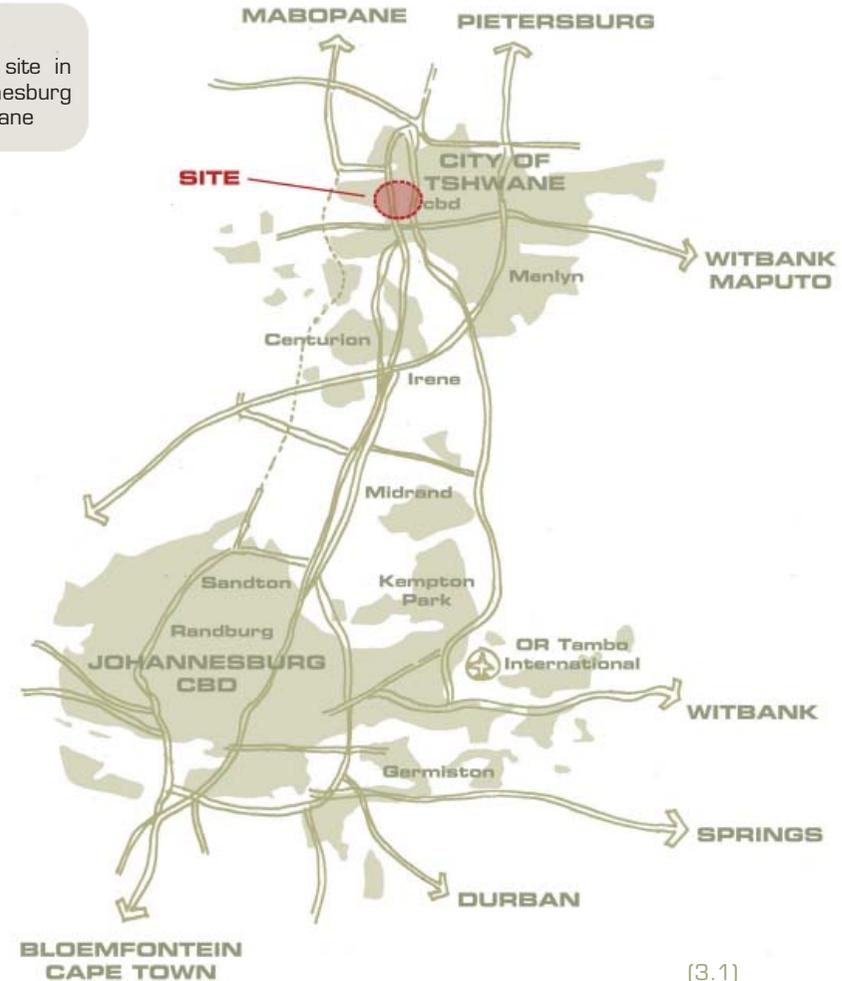
3.1.1_Macro Scale

3.1.1.1 Topography

Pretoria, the capital city of South Africa, is located in the municipal area of Tshwane. It is situated in the transitional area between the Highveld and the Bushveld and is bounded by three prominent mountain ridges; the northernmost ridge is the Magaliesberg, further south the Witwaters Mountain range through which the Apies River flows, and lastly the Schurweberg which forms the southern boundary of Tshwane. The development of Pretoria's street layout stands in relation to the surrounding topography. The east-to-west orientated city blocks line up with the surrounding koppies, and the longitudinal shapes determine the city street character (Van der Waal, 1990).

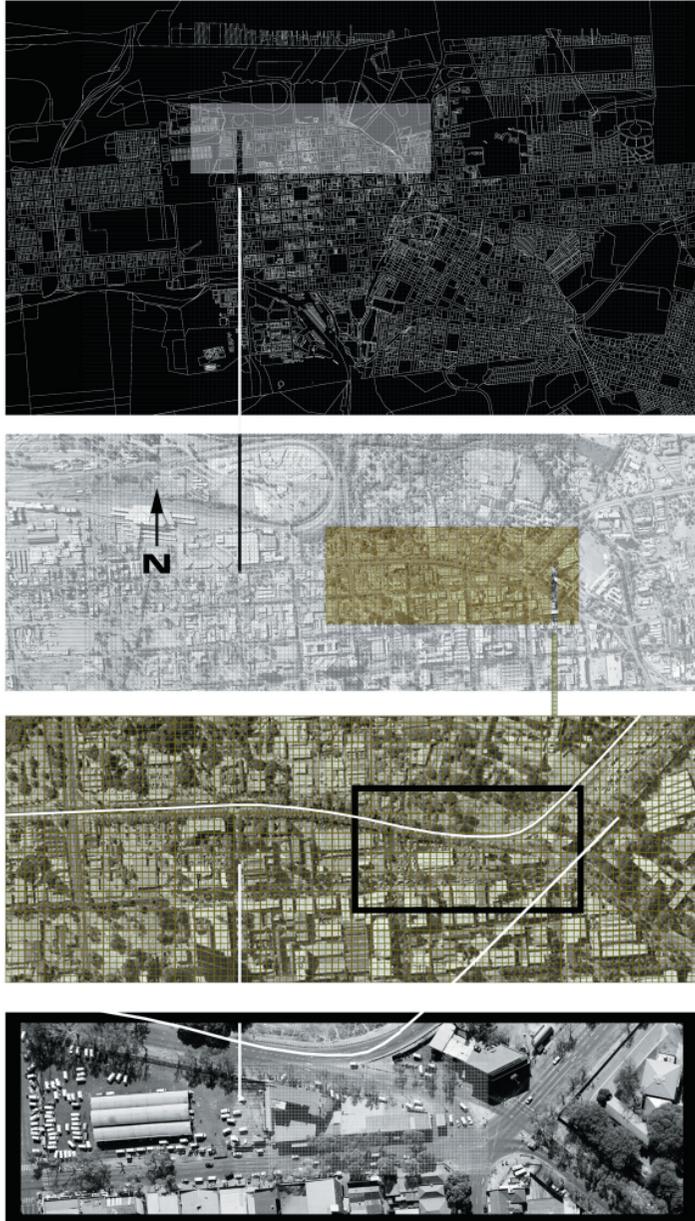
Figure (3.1):

Map indicating the site in relation to Johannesburg and the City of Tshwane



(3.1)

Figure (3.2):
Maps indicating the site
from city scale to immedi-
ate context



(3.2)

3.1.1.2 The City Past

Within the urban context of Pretoria, one deals with a city that was given life by an Apartheid Governments who wished to keep cheap black labor close to white cities, therefore given rise to periphery townships, which encompass most of our South African cities. These townships were designed specifically to discourage long-term settlement, and as a result, no provision was made for any form of economic generation. Informal settlements, or squatter camps, were on the other hand not government initiated, but by the inhabitants themselves, this form of informal developments occurred either because the townships were over-crowded, or workers coming from rural areas to work in the city, had no place to stay. The layout of Pretoria is thus typically that of an Apartheid city, fragmented due to an ideological racial segregation.

Until a late date in the 1980s, the growth of suburbs around the inner city was very closely and directly linked to the deepening segregation of South African cities (Mabin, 2007). But since then, suburbia has been the scene of residential desegregation – certainly more so than the townships, the other major component of South African urban residential space (ibid.). There may have been deepening of social rather than racial isolation as the suburbs have continued to boom in the post apartheid period. However, the development of the eastern suburbs has had a detrimental affect on the CBD of Pretoria.

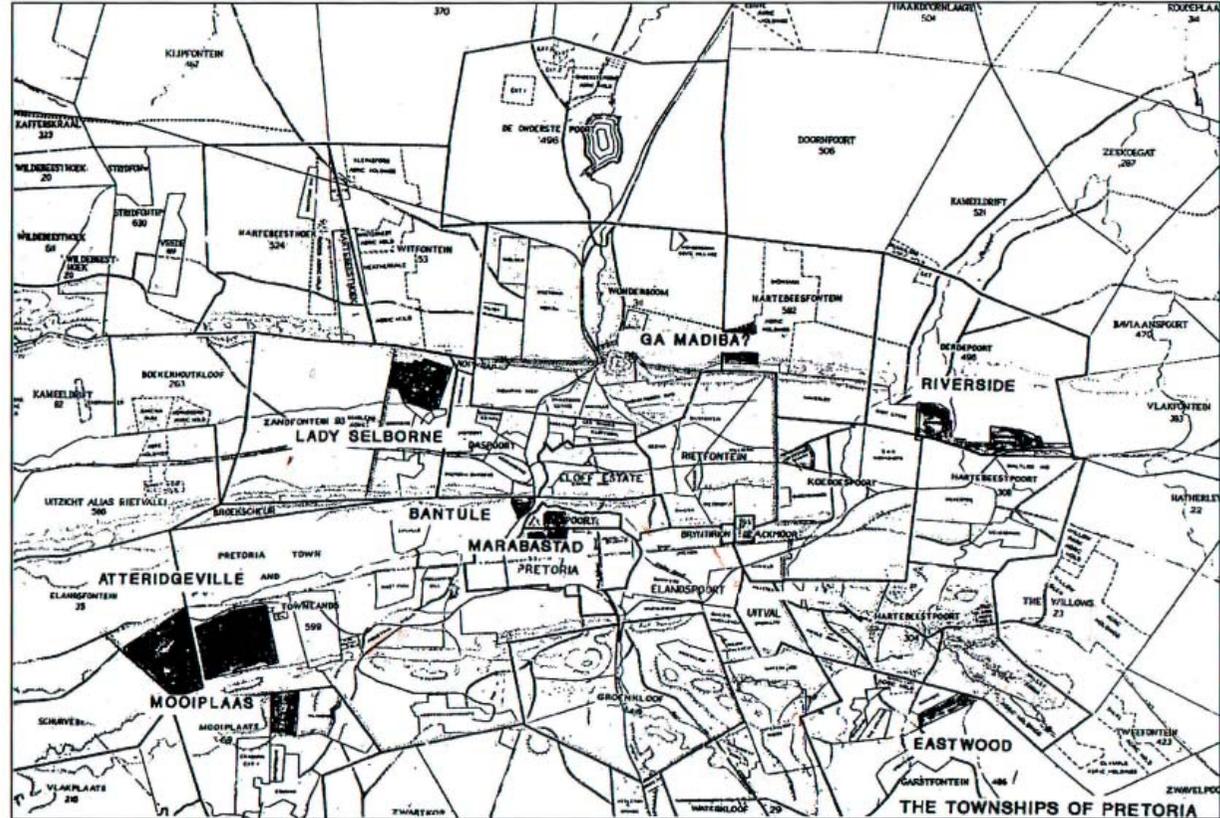
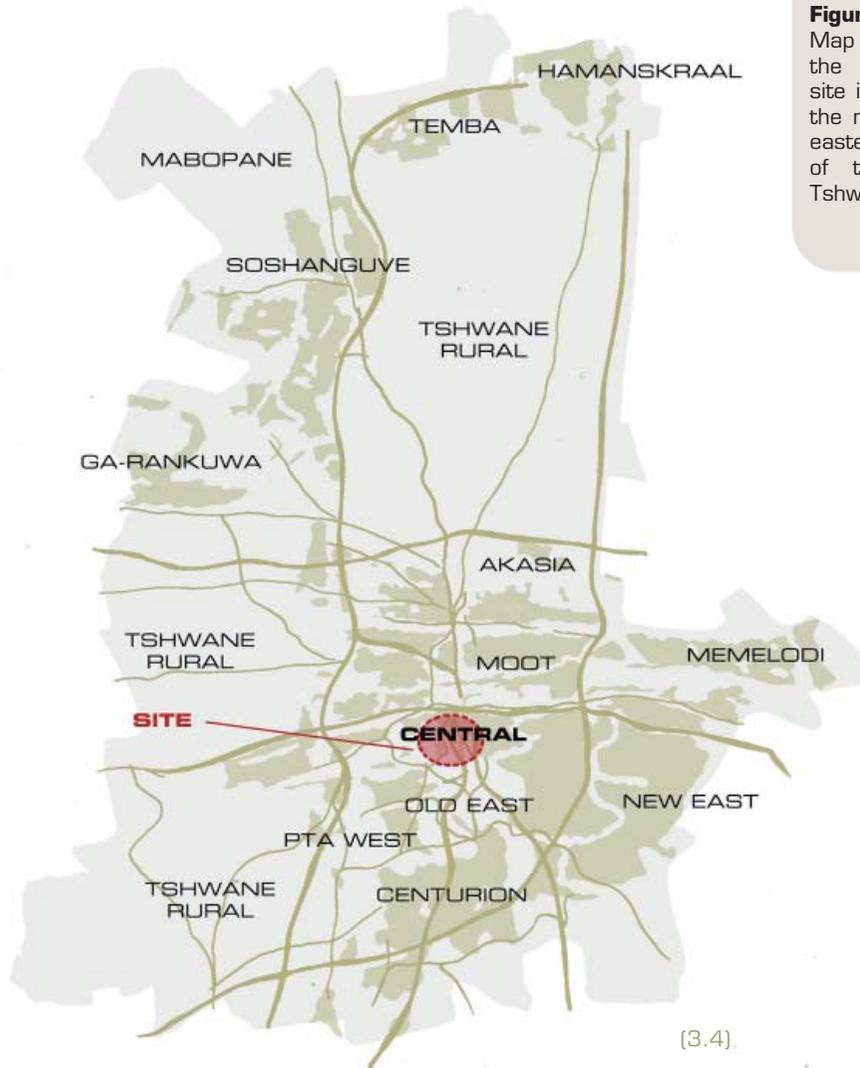


Figure (3.3):
Map indicating black townships
around the CBD of the City of
Tshwane - 1910

(3.3)

Figure (3.4):

Map indicating the position of site in relation to the northern and eastern suburbs of the City of Tshwane



3.1.1.3 The City Present

Over the past thirteen years, South African urban policy makers have made concerted efforts to address the fractured nature of South African cities stemming from Apartheid planning. South African urbanism during the past decade in most respects reflects some of the most innovative policy and institutional narratives and exercises applied to cities anywhere. From integrated development planning to the selective deployment of infrastructure projects, interventions have considerably changed the urban landscape to highly fractured and discordant cities. However, it is striking how unchanged the futures of cities are today. More than a decade after political liberation, it is increasingly clear that current urban planning interventions themselves generate fracturing effects. Yet in significant ways, the 'apartheid city past' is as indicative of general urban futures as the repairs and innovations of the past decade.

3.1.2_Wider Context of the Site

3.1.2.1 Precinct Scale

The site lies on the north-eastern periphery of Pretoria Central, acting as one of the main gateways into the inner city. This area is bounded on the north by Boom Street, being the primary feeder of traffic into and around the inner city. Nelson Mandela Drive defines the eastern boundary of the precinct, while D.F. Malan Drive forms the western boundary. The south of the precinct area is confronted with the CBD.

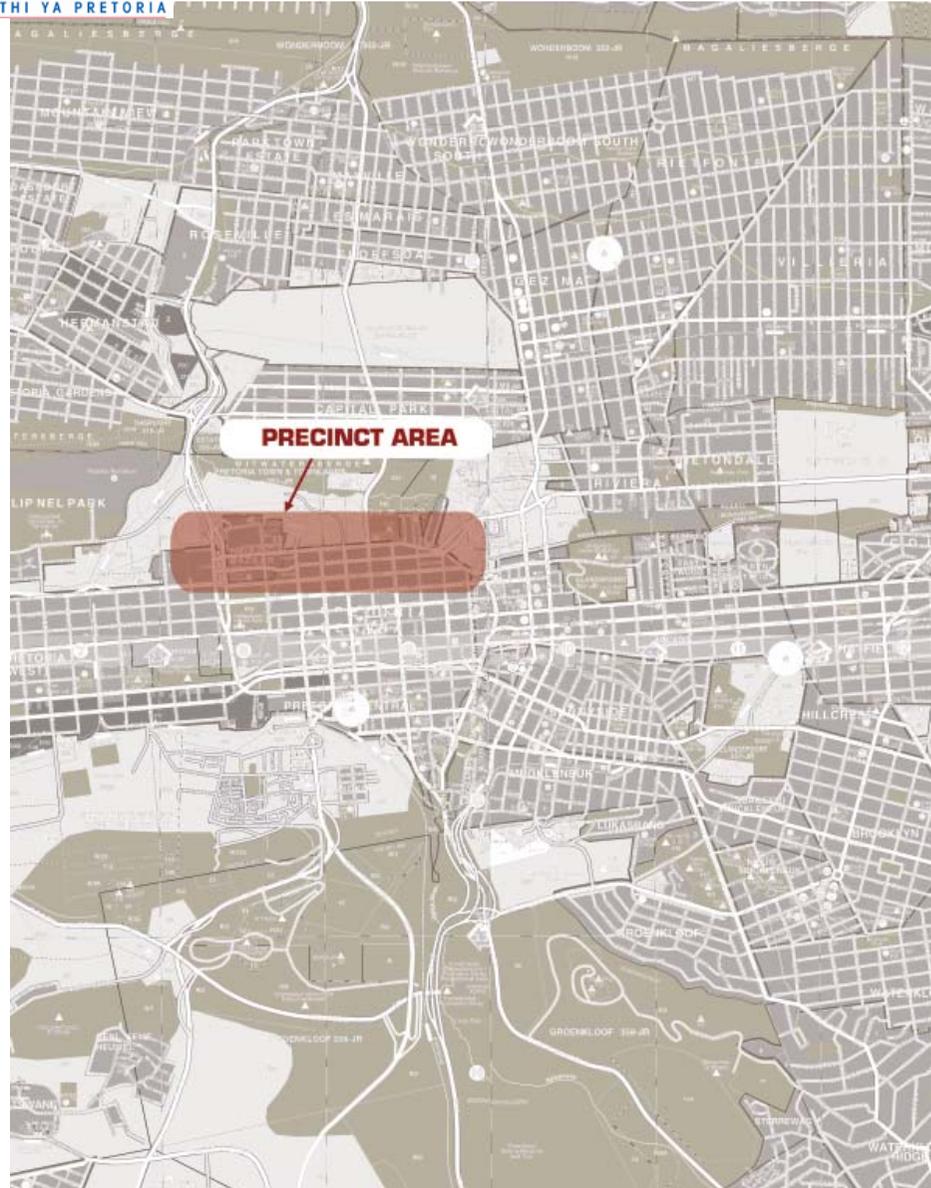
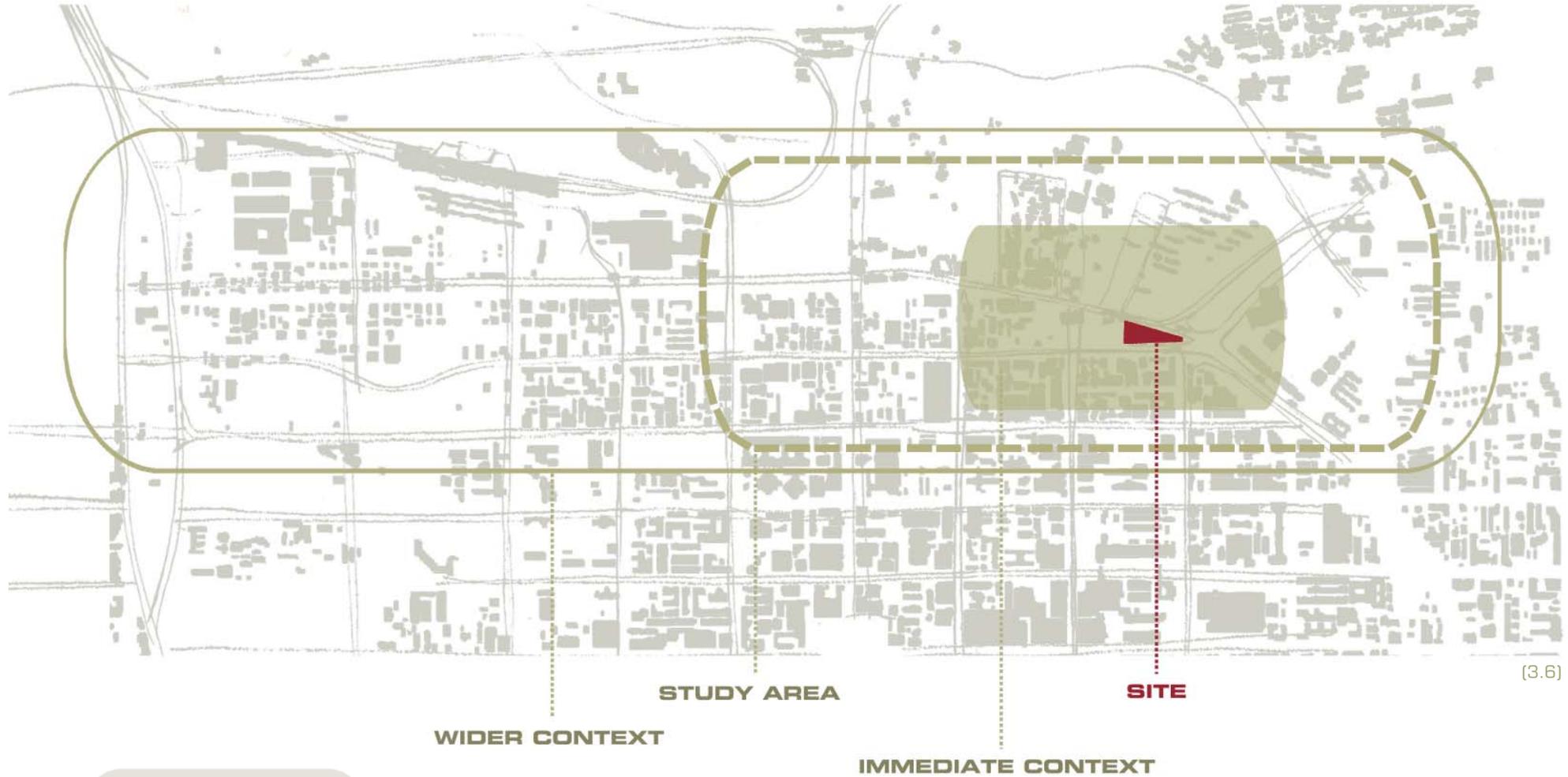


Figure (3.5):
Map indicating the precinct area in relation to the City of Tshwane

(3.5)



(3.6)

Figure (3.6):

Precinct scale: Site as part of the Tshwane Inner City Development and Regeneration Strategy

3.1.2.2 The Framework

The Tshwane Inner City Development and Regeneration Strategy is a macro scale urban development framework with the intended aim of achieving sustainable urban renewal. The framework is accepted as a given. The author did a revision of the framework, incorporating the selected site within the proposed development.

The interventions into the spatial and physical environment of the inner city, is based on eight building blocks, namely:

- Announcing the destination
- Cultural Circle
- Capital Precinct
- MDC and Apies River Promenade
- Tshwane Crossing
- Zone of Urban Regeneration
- Movement
- Exceptional public Environment

- Announcing the Destination

The significance of the inner city as destination must be announced in bold terms by defining the gateways into the capital area of Pretoria. Furthermore, the entrance into the built environment should be enhanced by creating appropriate landmarks. The proposed site provides an excellent opportunity for such a landmark. By entering the city from the north-east via Dr. Savage Rd, this site and surroundings not only become the first buildings to be confronted with, but it also become the earliest integrated, vibrant, high-intensity, mixed-use and pedestrian environment, linked to one of the main transport facilities within the central business district of Pretoria.

Although most of the gateways into the city could be enhanced by creating landmarks or symbols, the proposed site lends itself to a unique situation: It becomes a destination itself, and not only the announcement of that what might follows. The built form provides an indication that the intensity of development is increasing and changes from low density residential to a definite business environment.

It is therefore proposed that this entrance to the inner city be defined by a landmark or capital symbol celebrating the arrival of the inner city and presenting its character and identity, without compromising the activity that already nourish its users.



Figure (3.7):
The site as one of the main gateways into the city

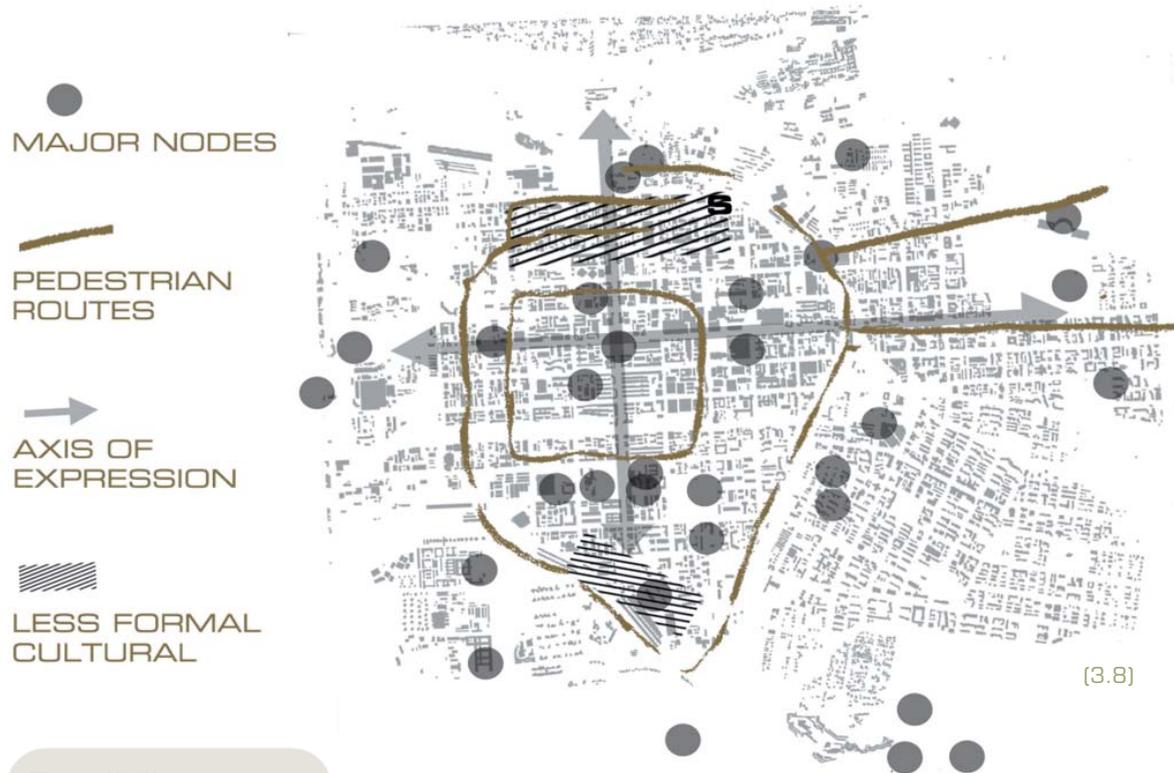


Figure (3.8):
 The site as part of the proposed cultural circle

- Cultural Circle

In keeping with the vision that Tshwane and its inner city be developed as the Capital of Culture in Africa, the main structuring component for the future physical development of the inner city is the proposed Cultural Circle.

This concept is based on the identification of all existing cultural landmarks and facilities and the enhancement thereof, as well as the development of new, contemporary cultural landmarks and the linking of these through a system of mono-rail transport and pedestrian routes.

The diagram illustrates the most important cultural nodes and places of interests within the CBD of Pretoria. It further shows the proposed connecting pedestrian routes and mono-rails. Although the site lies within an area with minimal cultural assets, it forms part of the main pedestrian routes connecting the major nodes in and on the periphery of the inner city.

- Defining the Capital Precinct

The function of the Capital City with regard to the concentration of government headquarters and its ceremonial and celebratory role are most appropriately placed within the inner city as the functional and symbolic heart of the Capital City. The Capital Precinct is defined as the area that will comprise the largest concentration of the Capital City elements.

The Capital Precinct is defined by a road grid that frames the inner city and creates a system of welcoming boulevards. It is proposed to create capital junctions within this system of welcoming boulevards at major crossings. These welcoming boulevards also link important strategic locations that should accommodate landmark developments and capital symbols or landmarks. The convergence of streets at the Boom Street and Bloed Street interchange forms part of the framing grid and has the potential to become an important capital junction.

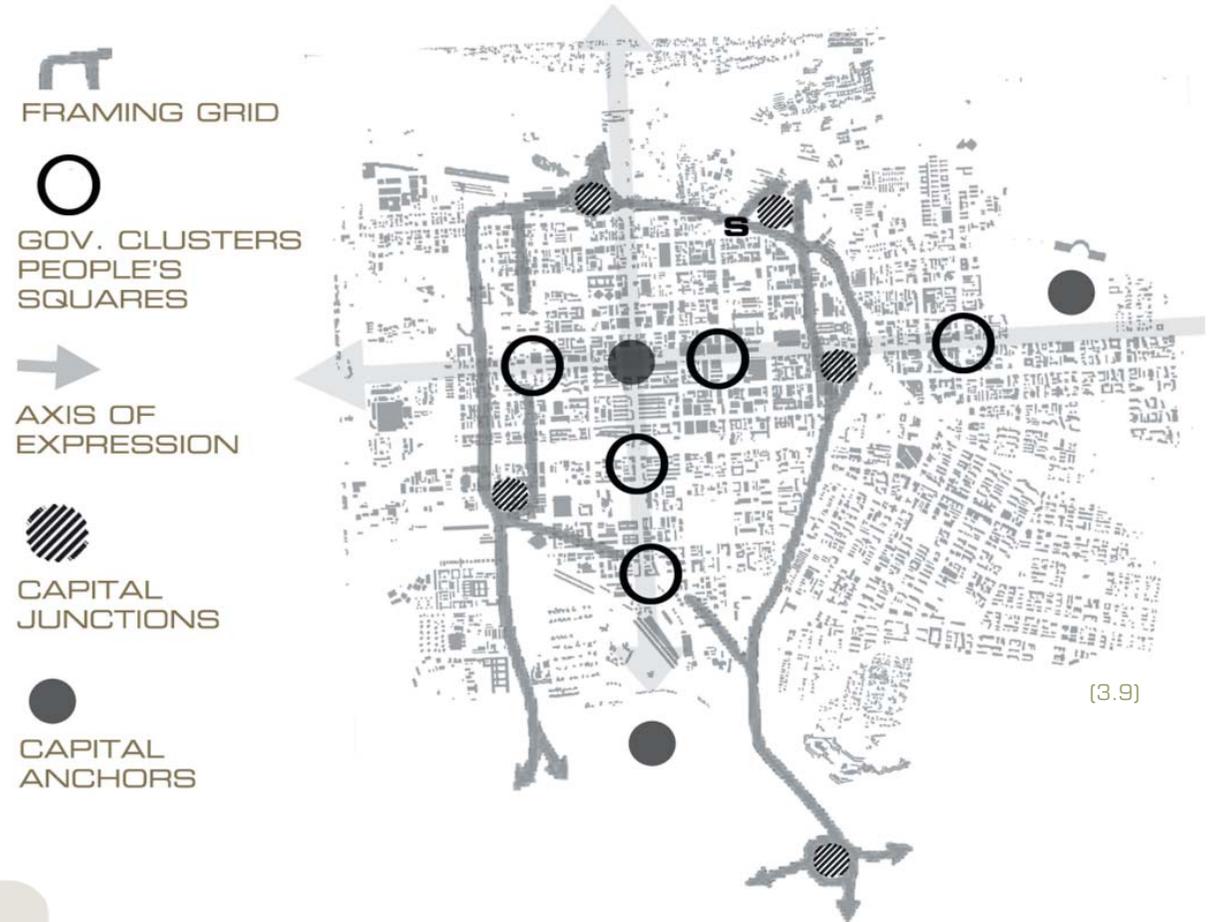


Figure (3.9):
Defining the capital precinct

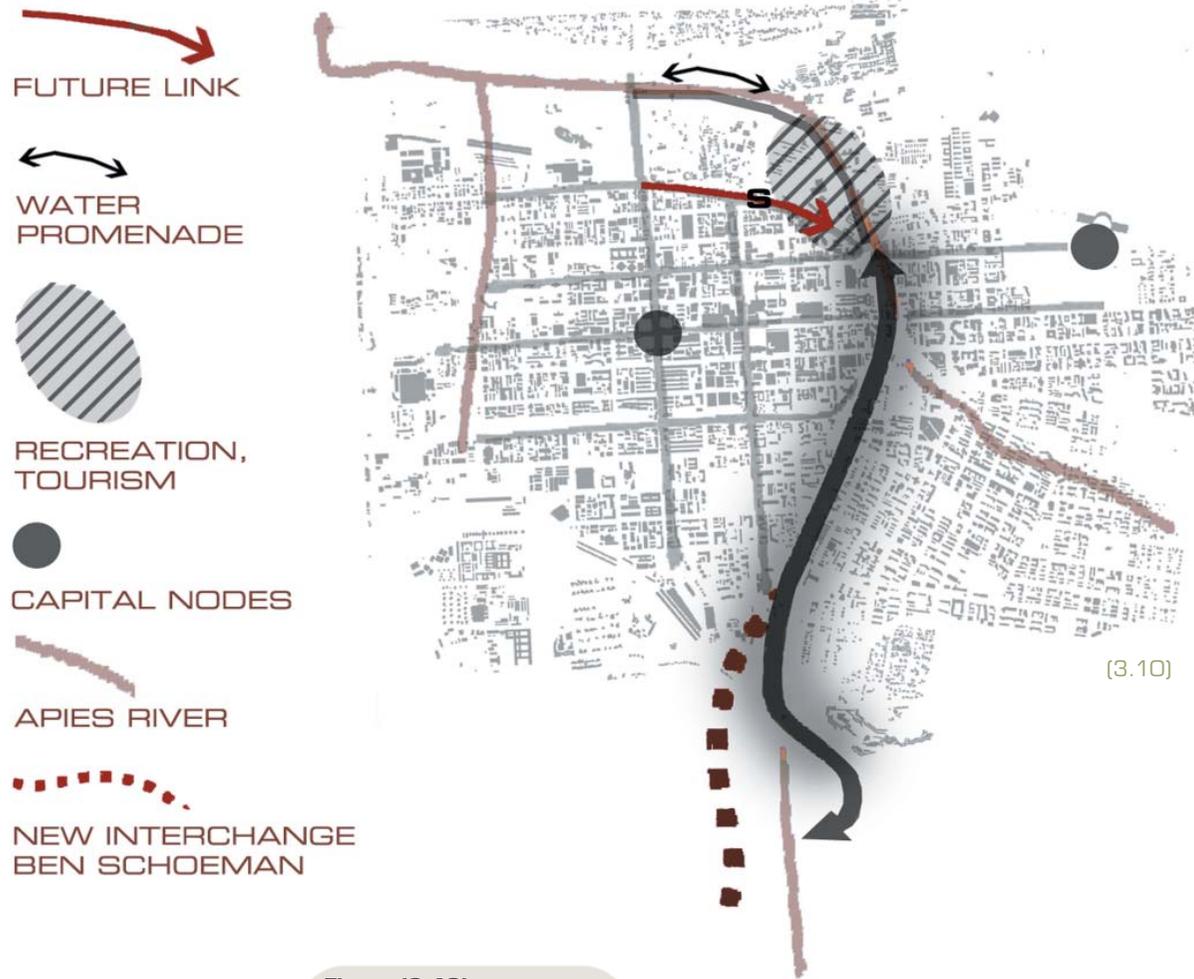


Figure (3.10):
 The site functioning as a gateway into the proposed Corridor

- Nelson Mandela Corridor and the Apies River Promenade

The Mandela Development Corridor is situated alongside Nelson Mandela Drive on the eastern edge of the Inner City. This corridor is a future focal area for the arts, culture, government, business, sports, entertainment and, commercial development. Nelson Mandela Drive has been upgraded to a dual carriageway and is the new main entrance to Pretoria. The Corridor allows prime exposure on Nelson Mandela Drive.

The open space system along the Apies Rivers can cater for the active recreational needs of residents and employees by providing facilities for walking, cycling and playing. Crossing over the Apies River should be identified through the use of specific design elements.

The land to the north of the proposed Tshwane crossing along the Apies River should be redeveloped for recreational- and entertainment purposes for residents and tourists in an environment that optimizes, compliment and enhances this important natural element. The Zoological Gardens is linked along the Apies River spine. This link could include a system of river boats on the Apies River.

The site, however not part of the initial proposal, functions as a gateway into the Corridor, and might therefore be considered as an extended section of the development at a later stage.

- Tshwane Crossing

The meeting place of the Apies River, the Walker Spruit, Nelson Mandela Drive and Church Street has been identified as a strategic location for a landmark catalytic development for the Inner City and for Tshwane itself.

With this in mind, one sees that the site again becomes one of the entrance roads to this development from the north, thus, feeding the Tshwane Crossing directly from all areas at the northern sphere of Pretoria, without rerouting them via the city center.



(3.11)

Figure (3.11):
The site in relation to the proposed Tshwane crossing

- Zone of Urban Regeneration

The northern, western and north-western (Marabastad) parts of the inner city are highly neglected areas that are in desperate need of urban regeneration. This area is ideally suited for the creation of a true integrated urban residential environment on the edge of the business district (the more central part of the inner city).

The area is within walking distance of the majority of employment opportunities in the inner city, and is also within walking distance of public transport facilities such as Belle Hombre Station and the Bloed Street Taxi Rank. This area comprises large tracts of derelict land or land underutilized, mostly State or Council owned that can be used to create a Zone of Urban Regeneration. The Zone of Urban Regeneration will comprise specific components, namely the Tshwane Park, Residential Development, Infill Business and Social Facilities, Marabastad Urban Village and Creative Industries.

Tshwane Park: It is proposed to create a significant open space area on this land focused along the Steenhovenspruit. This park can comprise hard and soft open spaces, recreation and sport facilities, restaurants and other leisure activities.

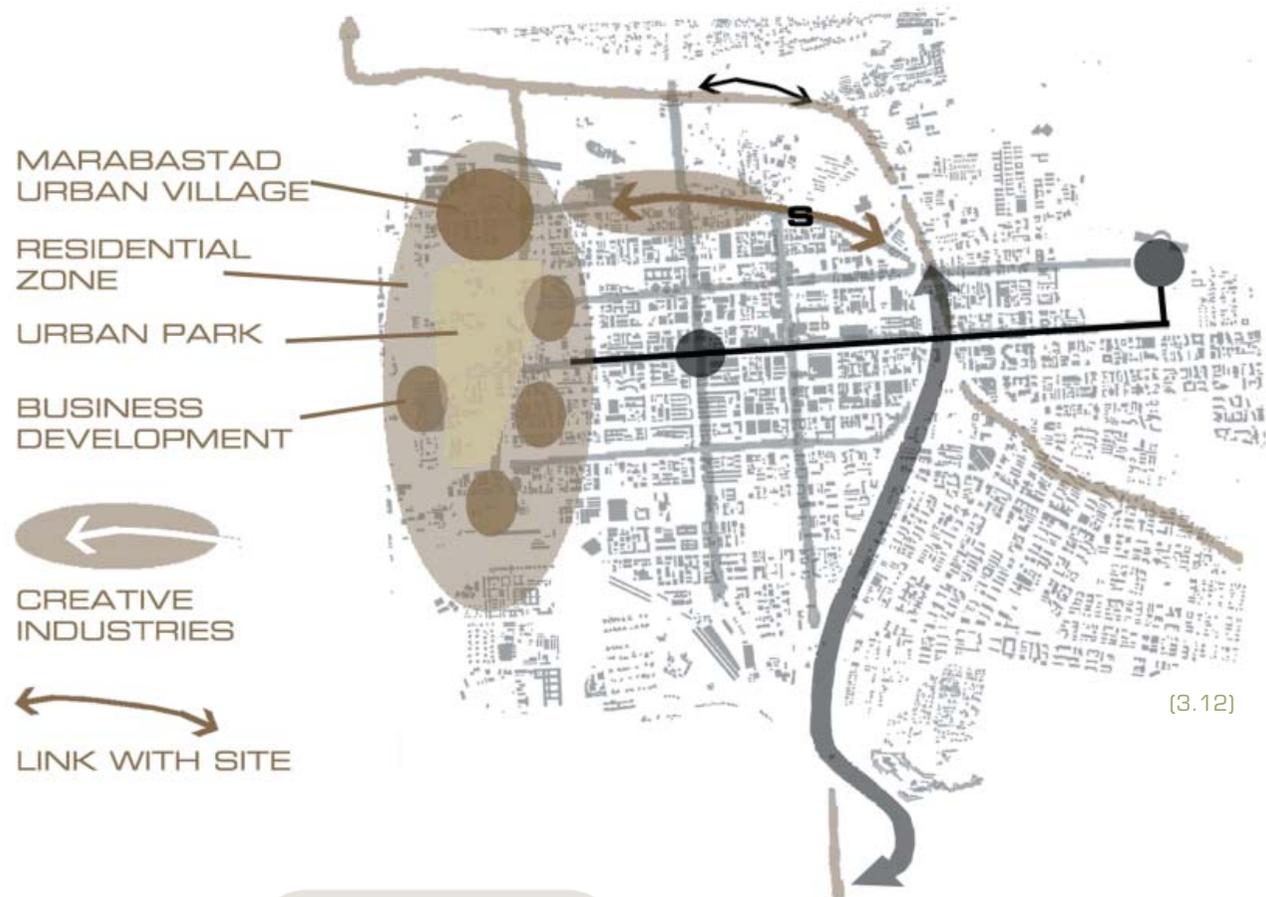
Residential Development: The area around the Tshwane Park should be developed as a high intensity urban residential area, comprising of different housing typologies and different price ranges in order to ensure a socially integrated environment. The transformation of this area into a fine grained urban residential area is appropriate from a historic point of view, as most of this area, specifically Marabastad, was traditionally a vibrant mixed-use residential area on the edge of the Inner City, until people were removed.

Infill Business and Social Facilities: The areas in between the residential developments should be developed for fine-grained urban environments comprising businesses, social facilities and entertainment activities that are aimed primarily at the residential population as well as tourists and visitors to the park. A strong emphasis should be placed on the development of employment opportunities that are geared towards the tourism market.

Marabastad Urban Village: Except for residential development, Marabastad is also considered ideal for the creation of an urban cultural precinct, comprising crafts, arts, entertainment etc. If correctly developed and managed in this manner and with a strong authentic historical foundation, this area can become a prime tourism destination in Tshwane.

Creative Industries: The area in front of the Pretoria Zoo is a seriously neglected area that detracts from this world renowned attraction. It is proposed that this area be redeveloped to provide attractive small business opportunities for creative industries that will contribute to the creation of a tourism hub around the Zoo.

The above-mentioned development is seen as a major intervention in the western part of the inner city, but also for the proposed site, as it will become part of the route towards and from this intervention. It will drastically alter the character and perceptions associated with this part of the city, and allow for the creation of vibrant urban areas that are focused on people and their needs.



(3.12)

Figure (3.12):
The site shown as influential to the zone of urban regeneration

- Movement and Accessibility

The linking of strategic places is an important element of the Strategic Development Framework. These linkages are functional but also contribute to the experience of the inner city as a destination. The role of public transport in this regard is critical and requires significant interventions and the establishment of a management framework. The aim is to make movement within the Inner City as convenient as possible for all modes of transport (private vehicles, public transport, pedestrians and cyclists), and to ensure that all the major elements, districts and tourist destinations are effectively linked.

The site lies between two major taxi ranks, namely the Bloed Street Taxi Rank and the regional taxi rank between Dr. Savage Drive and Soutpanberg Drive. Bloed Street is also being fed from the Belle Ombre Station at the west of the Inner City periphery. It therefore becomes the perfect node of linkage between the different strategic locations.



Figure (3.13):
Movement around the CBD of the City of Tshwane

- Exceptional Public Environment

The foundation of a unique and exciting inner city that is able to attract high quality development is an exceptional public environment that can compete with all the best cities in the world.

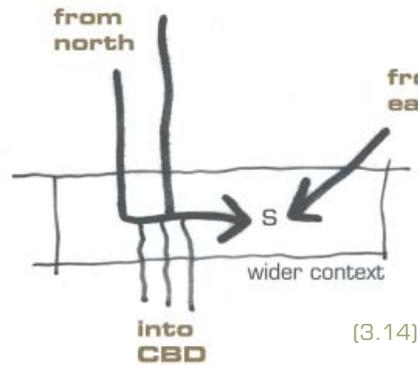
The public environment consists of the following elements:

- Public Spaces and Streetscape
- Architectural Quality of Buildings
- Urban Forestry
- Natural Environment

The Tshwane inner city should comprise sufficient public spaces which must be of exceptional quality. These spaces must also function properly for the purpose for which they are intended.

3.1.2.3 Influences on the Wider Context

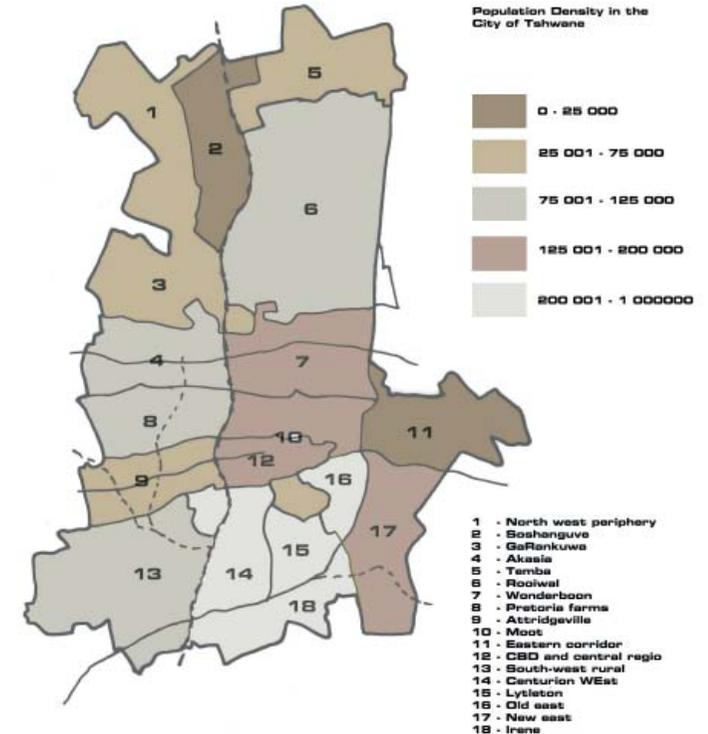
The northern suburbs have a greater impact on the wider context of the site, due to the higher population densities and a greater amount of commuters traveling towards the CBD.



(3.14)

Figure (3:14):
Influence from the north and east on the site

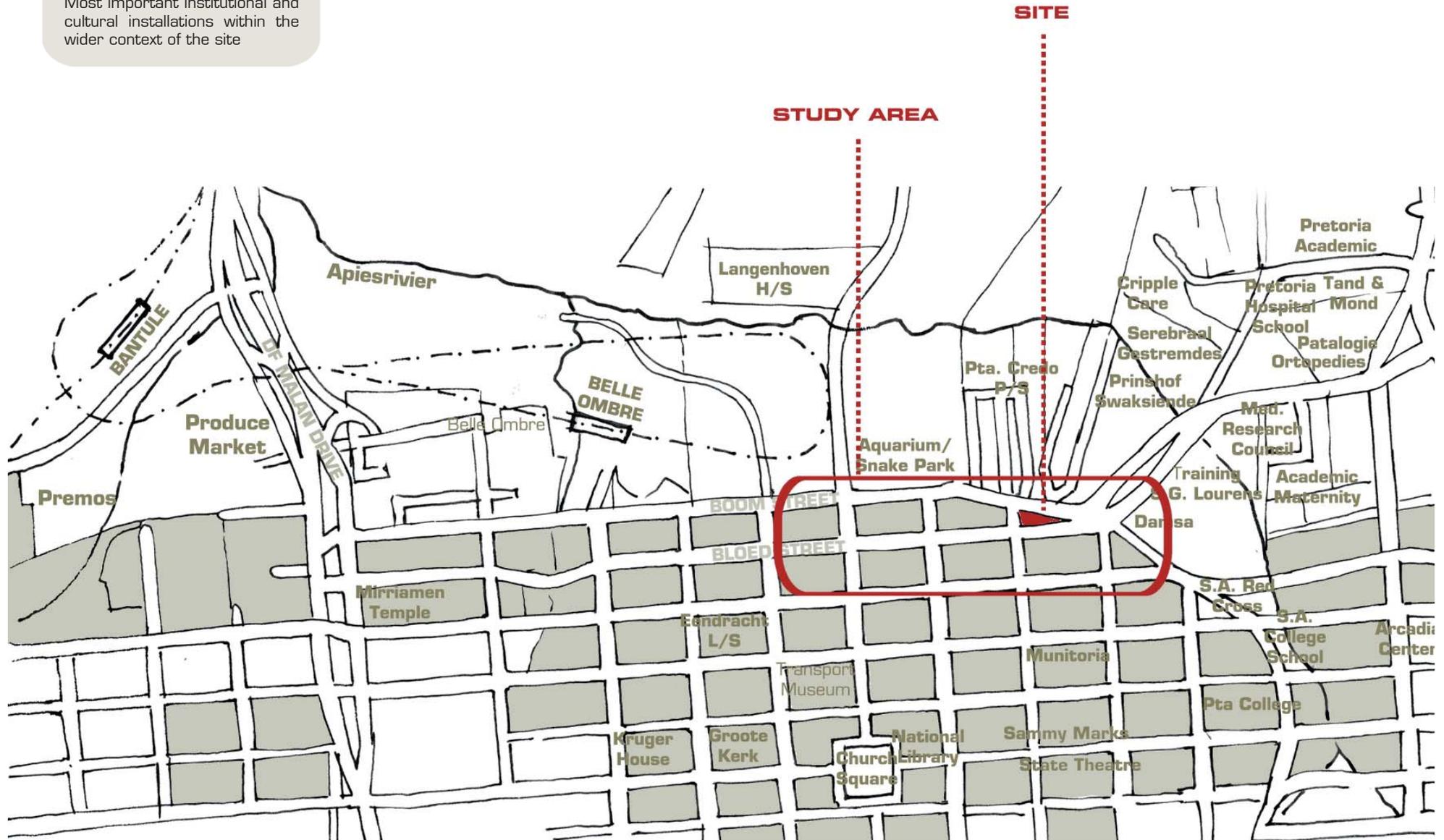
Figure (3.15):
Population densities in the City of Tshwane



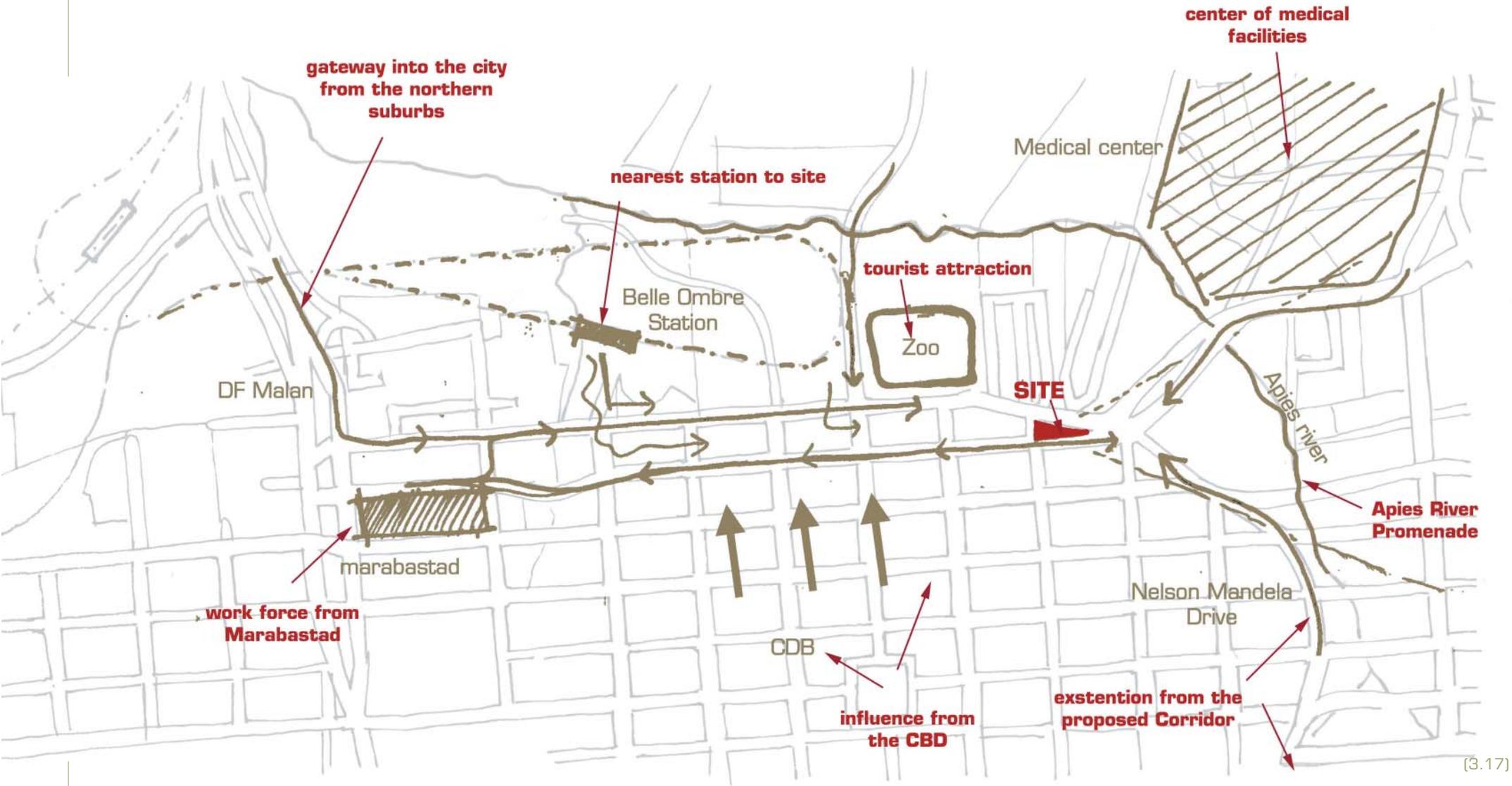
(3.15)

Figure (3.16):

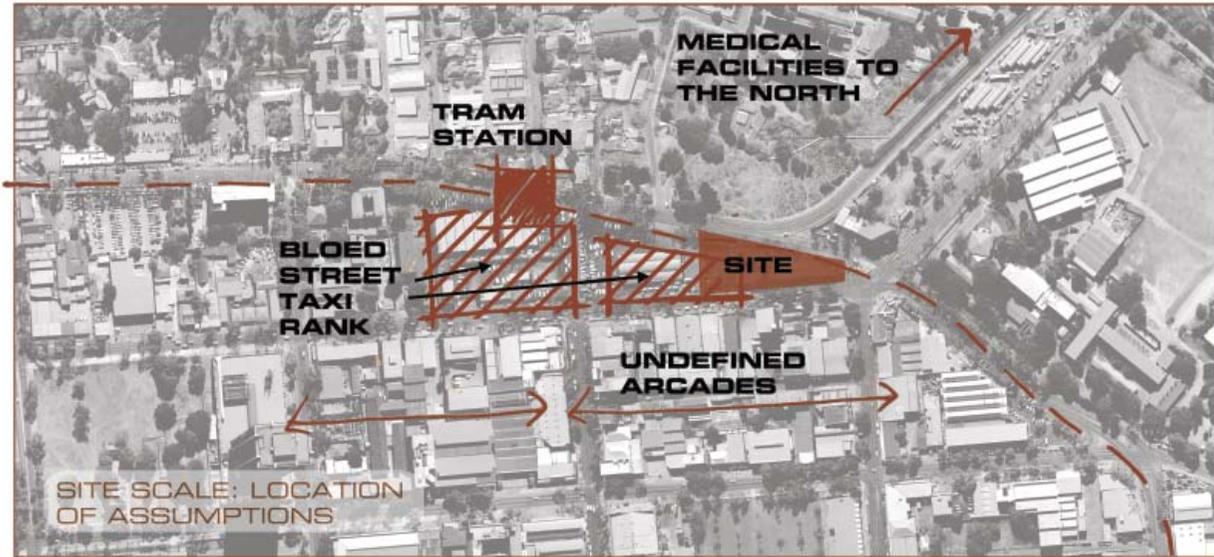
Most important institutional and cultural installations within the wider context of the site



(3.16)



(3.17)



(3.18)

(previous page) Figure (3.17):
 Influence of the wider context on the study area
Figure (3.18):
 Site scale: Assumptions within the study area

3.1.3.2 Assumptions within the Study Area

The study area is bounded on the west by Bosman Street, and the periphery of the Technicon of Pretoria's Art department defines the eastern boundary. Struben Street defines the southern boundary of the study area, while the Pretoria Zoological Gardens and Prinshof School, forms the northern boundary.

Assumptions within the study area include:

- The proposed tram system will be implemented
- The Boom Street Taxi Retail Park will be built at the current taxi stop in Bloed Street
- An arcade system will be implemented within the Inner City, connecting various public spaces
- The urban environment surrounding the proposed site, will maintain its unique identity
- The series of medical facilities situated on the north-eastern periphery of the inner city, will remain within this area

3.2_Sosio-economical Context

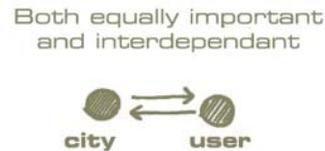
Our physical urban environment is shaped by the social and economic conditions and aspirations of the people who inhabit it. Inversely the quality of the physical environment has an impact on the quality of life, and the socio-economic conditions within the area. This reciprocal relationship between human activity and the physical environment is manifested in the change which takes place in and around our cities on an ongoing basis. (figure 3.19)

Access to social infrastructure is an important element of the context in which people live and attempt to gain access to education, training and jobs. Those who live within easy access to health, transport and education facilities will find it easier to make use of services important for their health and development, and to seek economic opportunities.

In the instance of the study area and site these dynamics have over the past years taken the form of a downward spiral, where the dynamic interaction of physical and social conditions, with the added impact of external political influences, have led to the current slum-like conditions.

The physical manifestations of the problem are uncontrolled hawking in miserable conditions, a breakdown of services, neglect of buildings, an unsafe, crime-ridden life on the streets, illegal dumping, accumulation of waste and a generally unsightly and unhealthy environment.

Changes to the outward appearance and urban fabric can only be effective if development plans also consider possible solutions to the social and economic problems affecting the area.



(3.19)

3.3_Institutional Context

According to the City of Tshwane Integrated Development plan:

- The study area is indicated as 'urban' with land uses varying from special residential to general business.
- The Apies River flood area and river bed is reserved for open space and conservation
- The precinct area is reserved for business, government, parking garages, parking sites, places of instruction, and places of public worship, places of refreshment, residential buildings, restricted industries, retail industries, shops, social halls, and vehicle sales mart.

Figure (3.19):

Sketch showing the interdependence between city and user

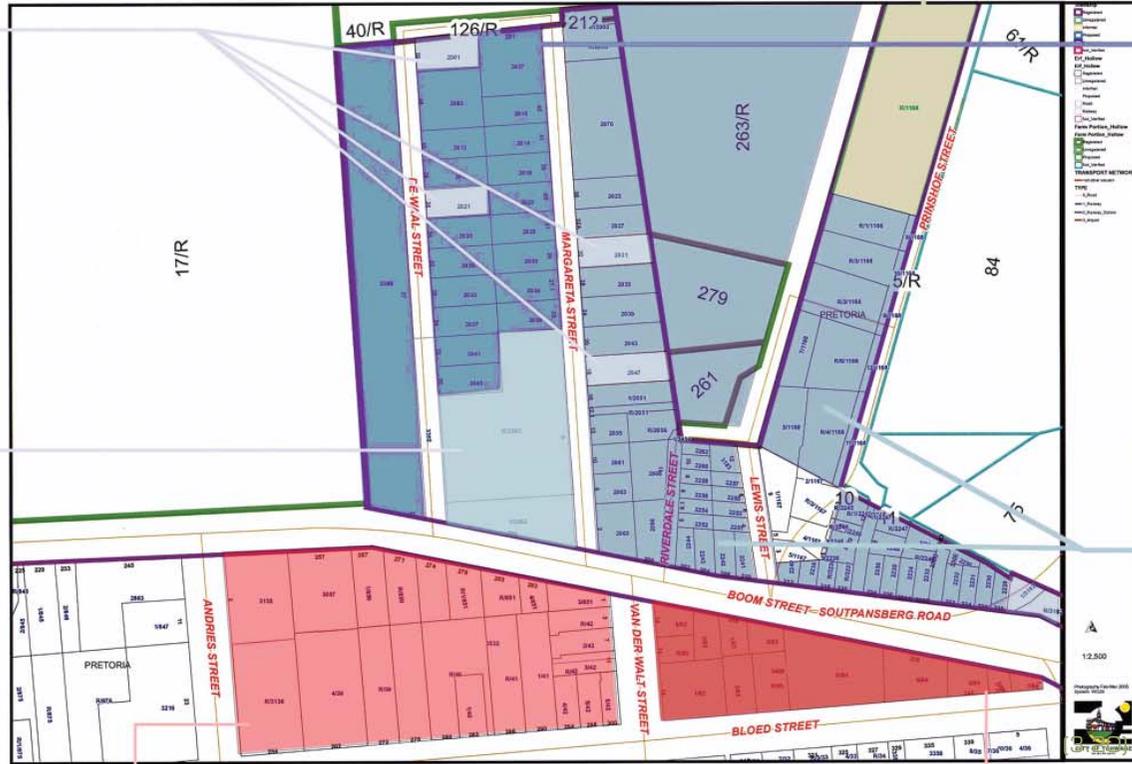
USE ZONE: Existing public open space

USE ZONE: **Special**

LAND USE / USES PERMITTED: Special Residential, Offices (excluding medical and legal professions) and such store-rooms as are supplementary and subservient to the main office use)
HEIGHT: 1 Storey
COVERAGE: 50%
FAR: 0.5
PARKING REQUIREMENTS: Offices: 4 parking spaces per 100m² gross floor area.
Store-rooms: 1 parking space per 100m² gross floor area.
Should be permanent dust-free, paved, drained surface to the satisfaction of the Municipality.

USE ZONE: **Special**

LAND USE / USES PERMITTED: Solely for a dairy factory and/or for purposes incidental thereto and/or storage and distribution and sale of dairy-products.
OR with written consent, housing.
HEIGHT: 2 Storeys
COVERAGE: 80%
FAR: 0.75
PARING REQUIREMENTS: 1 paved parking : 5 employees. 3 parking spaces for visitors and clients.



USE ZONE: **Special residential**

LAND USE / USES PERMITTED: One Dwelling-house
USES WITH CONSENT: Commune, Creches 13-19 children, Institutions, Parking garages, Parking sites adjacent to Zones VII and VIII. Places of instruction, Places of public worship, Social halls, Special buildings, Sports grounds, Toddlers' workshop, One additional dwelling house.
DENSITY: 500m² per erf
HEIGHT: 3 Storeys
COVERAGE: 50%
BUILDING LINES: Single storey: sides – 2.25m, rear – 3m. Double storey: sides – 3.75m, rear – 4.5m.
Street boundary: 3.5m

USE ZONE: **Special residential**

LAND USE / USES PERMITTED: One Dwelling-house
USES WITH CONSENT: Commune, Creches 13-19 children, Institutions, Parking garages, Parking sites adjacent to Zones VII and VIII. Places of instruction, Places of public worship, Social halls, Special buildings, Sports grounds, Toddlers' workshop, One additional dwelling house.
DENSITY: 500m² per erf
HEIGHT: 3 Storeys
COVERAGE: 50%
BUILDING LINES: Single storey: sides – 1.75m, rear – 2.25m. Double storey: sides – 3.0m, rear – 3.75m.
Street boundary: 3.5m

USE ZONE: **General Business**

LAND USE / USES PERMITTED: Business, Government, Parking garages, Parking sites, Places of instruction, Places of public worship, Places of refreshment, Residential buildings, Restricted industries, Retail Industries, Shops, Social halls, Vehicle sales marts.
USES WITH CONSENT: Dwelling houses, Filling stations, Institutions, Motor workshops, Places of amusement, Public garages, Restricted industries, Special buildings, Sports grounds, Warehouses.
USES NOT PERMITTED: Panel-beating and spray-painting, other uses not above.
DENSITY: N/A
COVERAGE: Zone 4: 60%
HEIGHT: Zone 5: 19m
FLOOR SPACE RATIO: Zone 4: 2.5
BUILDING LINES: Sides: Null. Street: 3.5

USE ZONE: **General Business**

LAND USE / USES PERMITTED: Business, Government, Parking garages, Parking sites, Places of instruction, Places of public worship, Places of refreshment, Residential buildings, Restricted industries, Retail Industries, Shops, Social halls, Vehicle sales marts.
USES WITH CONSENT: Dwelling houses, Filling stations, Institutions, Motor workshops, Places of amusement, Public garages, Restricted industries, Special buildings, Sports grounds, Warehouses.
USES NOT PERMITTED: Panel-beating and spray-painting, other uses not above.
DENSITY: N/A
COVERAGE: In accordance with the approved SDP.
HEIGHT: 15m
FLOOR SPACE RATIO: 1:1
BUILDING LINES: In accordance with the approved SDP.

Figure (3.20):

Land uses and zoning within the study area

3.4_Historical Context

3.4.1 History of the Immediate Context of the Site

Pretoria can be considered as a relatively young city, established only in 1855. The development of the early establishment, was not forced upon the river and its location, but rather defined by it, for water was provided to the city from fountains via water furrows. The Pretoria community, due to its political footing and the knowledge of what a contemporary city should look like, was established above the river around Church Square on a grid defined by openings within the Daspoort and Schurweberg ridges (Fisher, Le Roux, Maré 1998:61).

During the time when Pretoria was established, the land within the study area was part of a property called Prinshof, named after Joggem 'Tweeduim' Prinshof (Van der Waal 1990:28). In the early 20th century the area served as the Prinshof experimental station where the cultivation of different types of grass species took place (ibid) Property on the west bank was owned by Theodore Hove (1834 – 1906). A linocut work by Hendrik Pierneef show what the area looked like in 1925.

Hove's drift provided access across the Apies River from central Pretoria to the north and in 1932 a bridge was built here by Bain & Proudfoot. In 1935 Dr. Savage Street was built across the bridge. The road was named after Dr. SR Savage who was major of Pretoria from 1907 – 1908 (Heydenrych & Swiegers 1999: 38).



(3.21)

Figure (3.21):
'Uniegebou Vanaf Prinshof , Pretoria 1925' by Hendrik Potgieter
Figure (3.22) & (3.23):
Driving from Boom Street towards Dr. Savage road



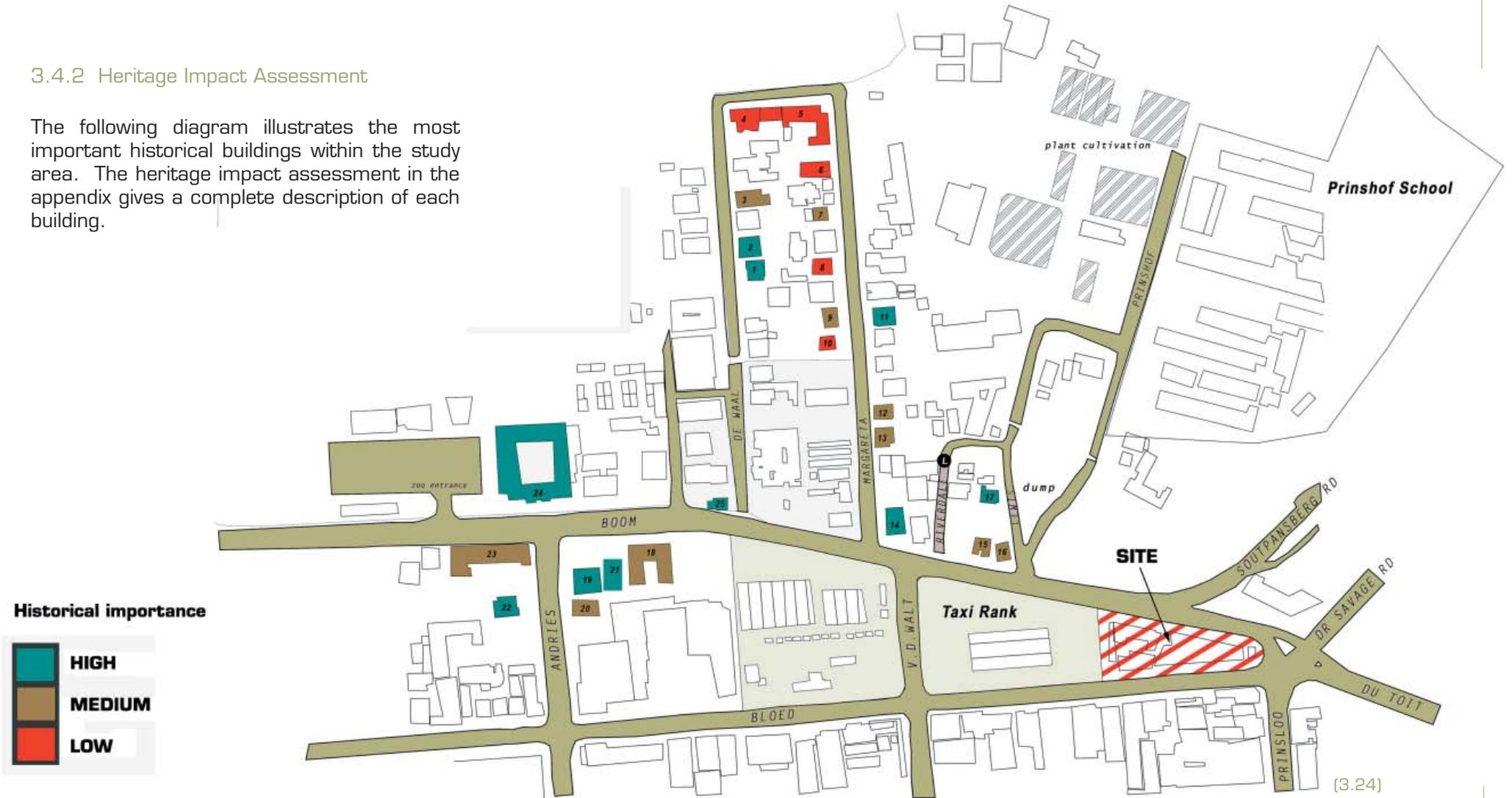
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(3.23)

3.4.2 Heritage Impact Assessment

The following diagram illustrates the most important historical buildings within the study area. The heritage impact assessment in the appendix gives a complete description of each building.



3.5_Site Analysis

3.5.1 Scope of the Analysis

The site is located at the convergence of four major roads, creating a unique transportation and pedestrian junction. The north-eastern side of the site is bound by Boom Street, while Bloed Street forms the southern boundary. Both of the above mentioned are one-way streets respectively running in an eastern and western direction. Boom Street diverges north-east into Soutpansberg Rd, while one enters the junction from this same direction via Dr. Savage Rd. Boom Street, in the southern direction, further diverges into Prinsloo Street, while the south-eastern divergence later extends into Nelson Mandela Drive. The western side of the site is bordered by the future-proposed Bloed Street Taxi Retail Park.

Due to the nature of the brief, the immediate site will be analysed on two levels:

- 1 Existing demands of the site
- 2 Future proposals and development



(3.25)

Figure (3.25):
Aerial view of the site and intersection

Dr Savage Rd

Site

Existing adjacent building

Existing taxi rank

Intersection



(3.26)

Figure (3.26):
North-eastern view towards
the site

Intersection

Du Toit Street

Prinsloo Street

Existing
opposite building

Site

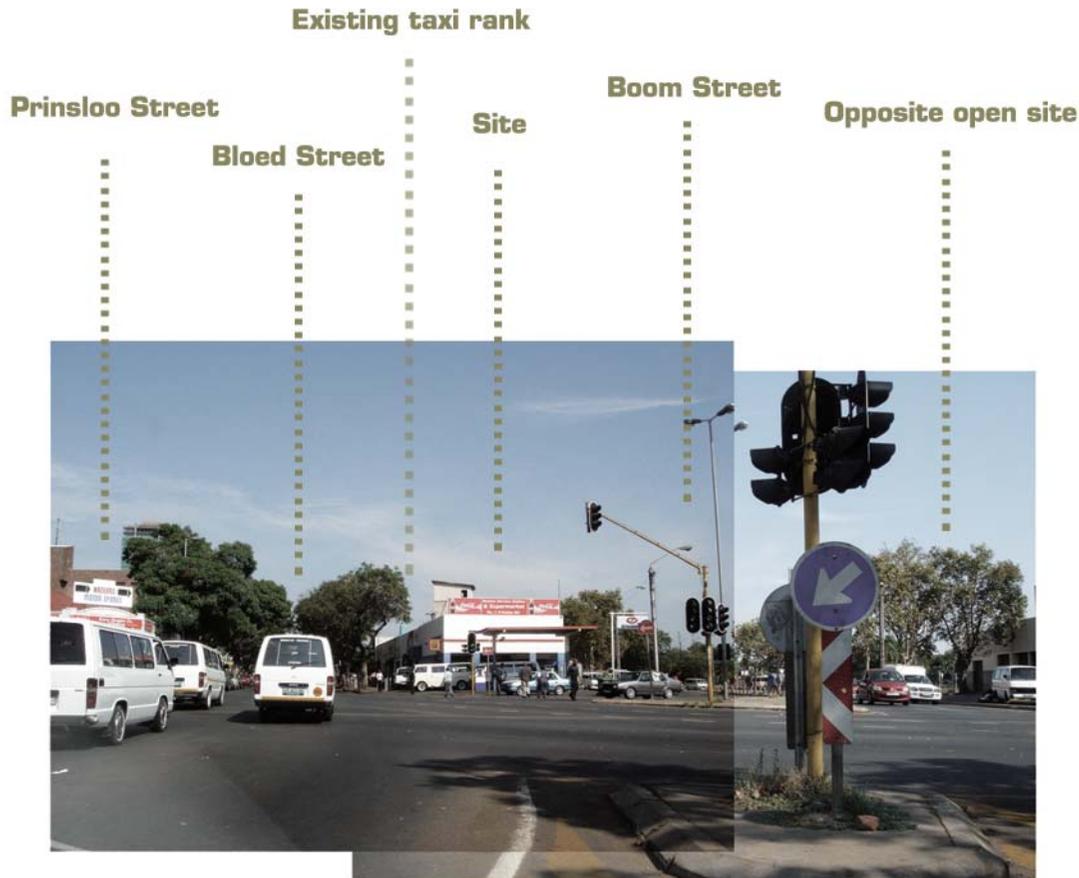
Existing taxi rank

Opposite open site



(3.27)

Figure (3.27):
East-south view towards the
intersection and the site



(3.28)

Figure (3.28):
Eastern view towards the
intersection and the site

3.5.2 Site Elements

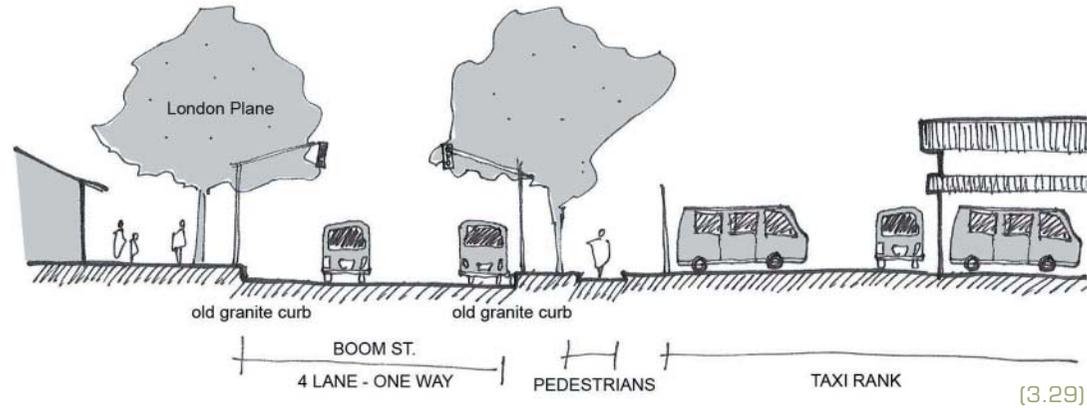
The site requires a variety of responses generated from the main site elements and aspects. These will be divided into four categories:

- a Street character
- b Roads
- c Circulation
- d Adjacent buildings

a Street Character

In an urban setting, the location, form, materials, and other architectural features of buildings largely determine the character of the street and, in turn, affect the character of other design elements that reinforce this authentic urban character. These are the elements that compose the public realm. These elements significantly contribute to the livability of the city. The use and placement of these elements are determined by what type of street character is being sought.

Street character present: The character of a street is established and maintained by many factors beyond the dimensions imposed by vehicular traffic. Land use alone typically creates a critical context. Even if the adjacent land use is identical, local building codes could create streets with very different characters. Two streets with the same dimensions and the same land uses but laid out in accordance with very different building codes – one suburban and one urban – may have widely different characters.



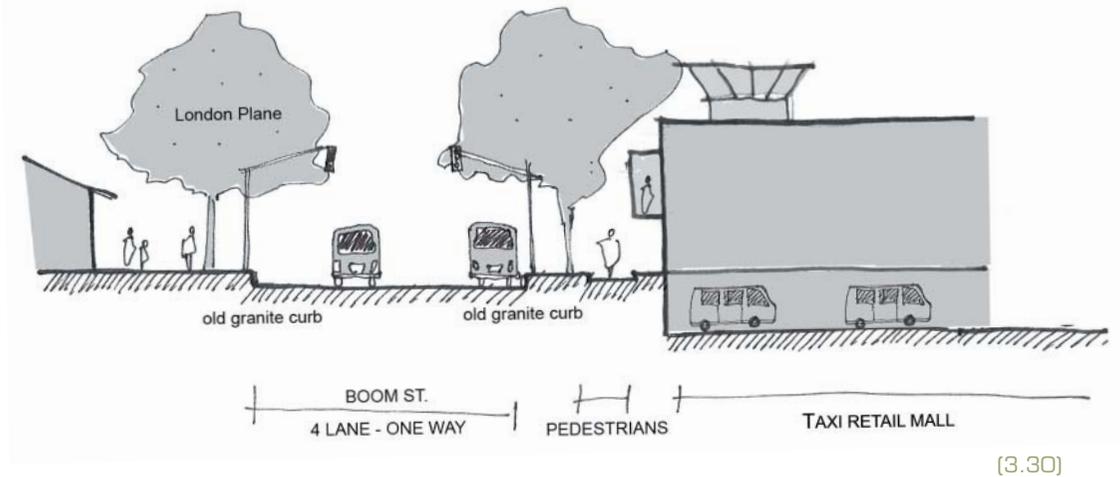
Boom Street: As indicated in figure 3.20 and figure 3.31, the zoning and land uses around the site, varies between that of general business and special residential. The residential area to the north of the site is in fact one of the oldest residential areas within the city, with houses and buildings exceeding 60 years in age. The street character of Boom Street can therefore be classified as both urban and sub-urban.

Figure (3.29):

Section through Boom Street illustrating existing street character

Figure (3.30):

Section illustrating future character of Boom Street after the proposed Taxi Retail Park development



Bloed Street south of the site is a more business orientated street, with higher-rise buildings at both sides. These buildings are flanked by retail stores. The stores occupy the first floor of the multistory buildings with offices or housing over the stores. The buildings are mostly massed shoulder to shoulder with individual stores having their own entrance from the street. These buildings are typically separated from the street by only a sidewalk. The height of the buildings opposite the southern side of the site varies between 2 and 3 stories. Proposed future development will not exceed 4 stories.

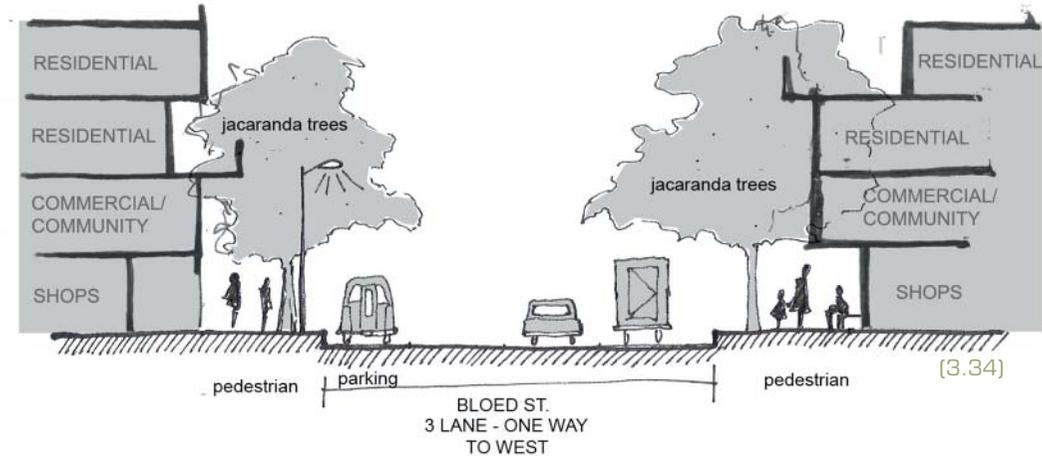
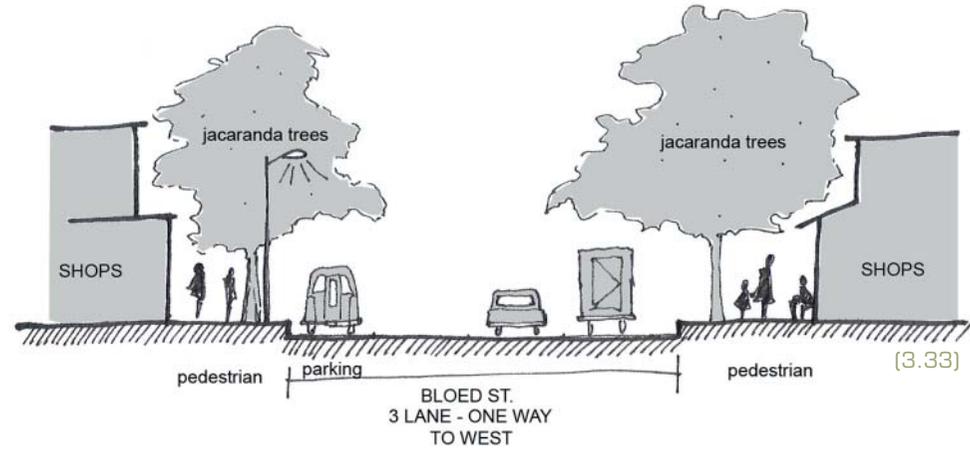
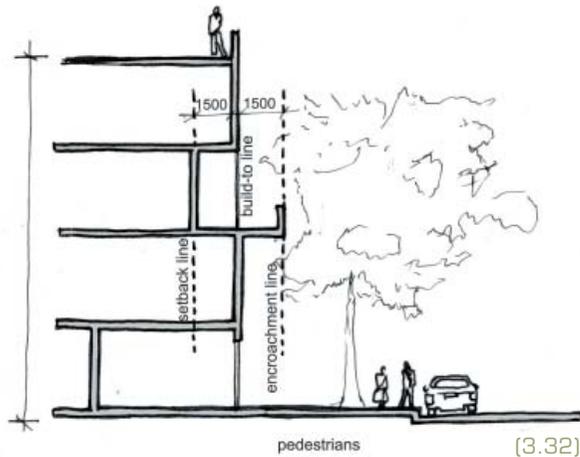
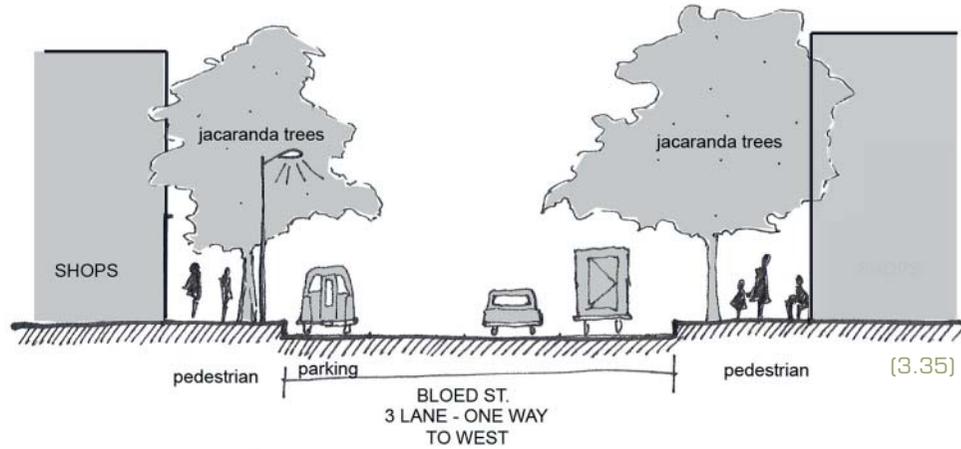


Figure (3.33): Section through Bloed Street illustrating the existing street character
Figure (3.32) & (3.34): Section illustrating possible future character of Bloed Street



The ideal street character: Most spatial and regional planning strategies suggest the set back of upper levels of tall building to help create a pedestrian scale at street level and to mitigate unwanted wind effects (figure 3.32). However, as with most European cities, it is shown time and again that it is the more uniform building facades that create the ideal streetscape. The above statement will be explored and considered during the design process.



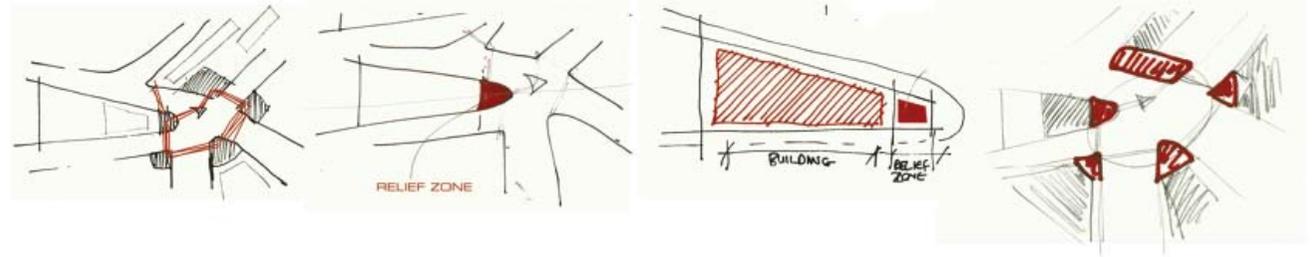
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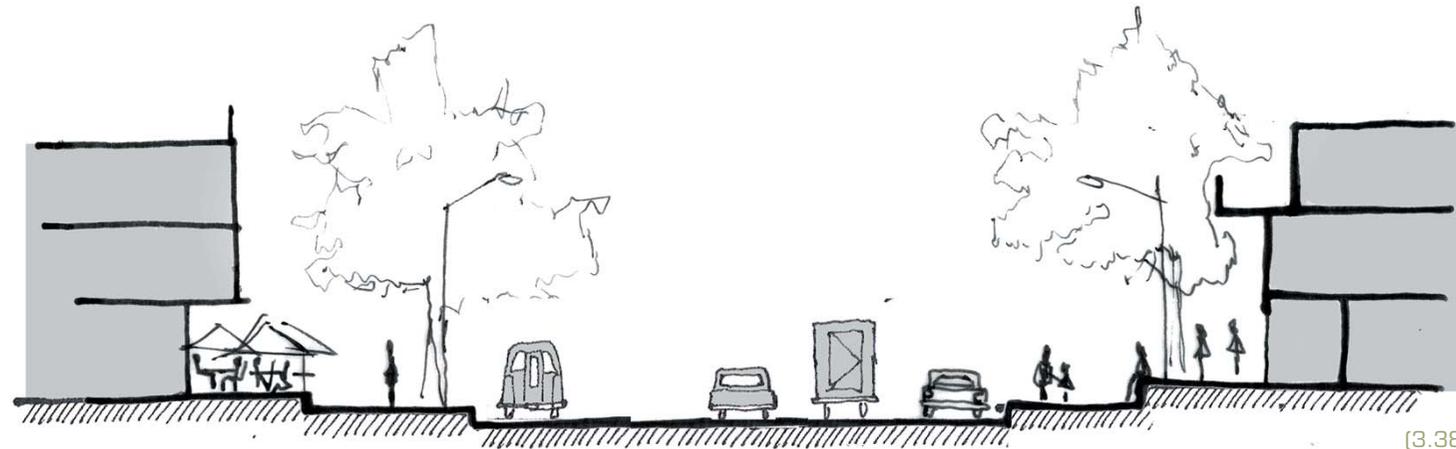
(3.37)

Figure (3.35): Section through Bloed Street illustrating the ideal street character
Figure (3.36) & (3.37): Typical European streetscapes: Views of streets in Paris, France

The vibrant nature of the intersection is an opportunity to generate a lot of energy within the building and to have an exciting on-street interface. Although in a neglected state, it already indicates the potential for being a landmark intervention. It is also important to incorporate the concept of a relief-zone on the corners of each site. These areas become small 'islands' where accidental meeting spaces can happen.



(3.39)



(3.38)

Figure (3.38): Section through the intersection
Figure (3.39): Sketches showing the concept of the 'relief zone'



(3.40)

Figure (3.40):

Photograph of the intersection taken from the adjacent building.

Future proposals and development: The street must support the activities of people on the adjacent properties, that is, it must provide optimal volumes of traffic at optimal rates to support the desired land uses and layout of those land uses. The street must be designed not to stifle nor overwhelm adjacent land use. The adjacent property to the site will be developed into a Taxi Retail Park; this Retail Park will be massed together in the form of a mall with individual stores only accessible from the interior of the building. However, there will be stores on the southern side of the development with their own entrance from the street. This will encourage on-street interaction of people on the sidewalks. For the northern side of the development, towards Bloed Street, the sidewalks will be less interactive. This becomes an opportunity for the proposed design.

Urban parking will vary between parking on the street, on surface lots behind the buildings, or in parking ramps. Thus, the same street could easily have very different character depending on the location of parking. The dimensions of the street itself do not create a rural, suburban, or urban street.

b Roads

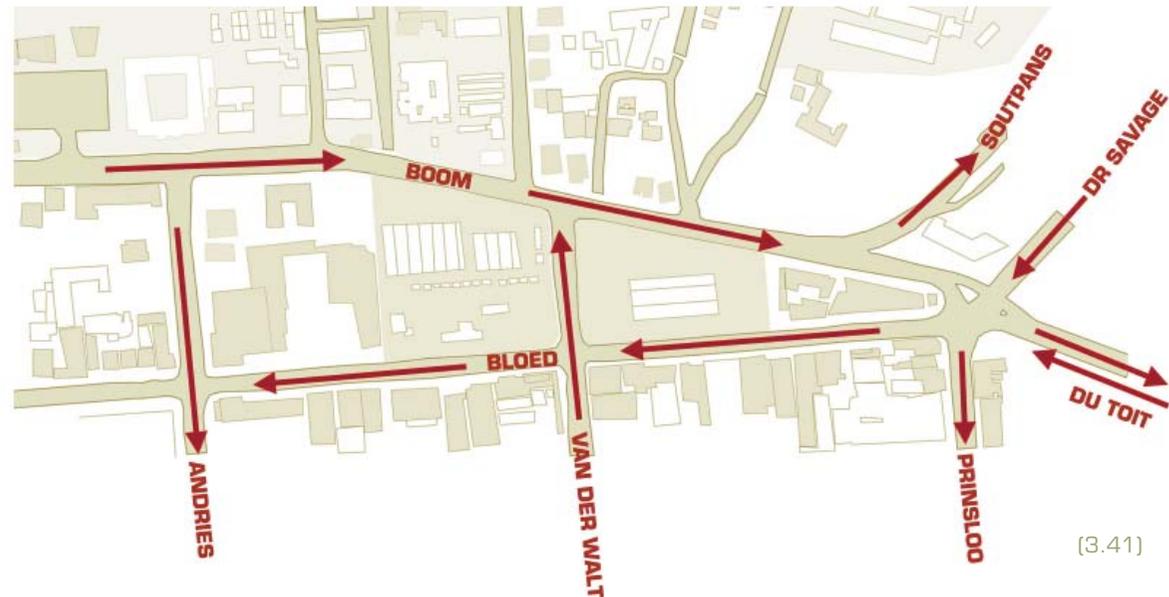
Existing road order: Bloed Street, running to the west, consists of man made green space, with high traffic at intervals, due to the existing taxi rank. Bloed Street is also one of the main streets towards Marabastad located to the west of the city.

The Jacaranda trees contribute to a pleasing pedestrian experience. The building should have an appropriate response to this soft space. The pleasant view towards the pedestrian walkway will contribute aesthetically to spaces within the building.

Boom Street has less pedestrian activity with a higher order of traffic in the direction east from the city center. This is partly due to the nearby taxi rank, but also due to the fact that Boom Street forms the periphery of the CBD, and therefore becomes one of the main feeding roads around the Inner City towards the east. The north side of the building therefore demands a hard edge, with appropriate permeability to allow some degree of on-street interaction. It is also the only street within the city of Pretoria planted with Plantane trees. The pleasant contribution of the trees should be incorporated within the design precinct.

Influences of future proposals and development: The proposed Bloed Street Taxi and Retail Park will have two main influences on the roads within the immediate surroundings of the site. Firstly it will increase the amount of traffic moving through the area. Secondly, there will be a more structured system according to which the traffic will flow around the site.

Figure (3.41):
Main street directions and one-ways



(3.41)

c Circulation

Urban fragmentation lies at the heart of many of the problems of modern cities. It severely constrains the economic potential of cities and urban regeneration developments find it hard to create sufficiently high levels of pedestrian movement. The basic requirement for a viable pedestrian infrastructure is a simple, interconnected, spatially integrated, continuously animated and intelligible public realm. Critical analysis is required of the urban environment beyond a project's designated boundary to understand how the surrounding urban layout directly affects movement in and around a particular site.

The pedestrian public realm is the key to successful urban redevelopment. In one sense, vehicular transport systems are the means to deliver pedestrians to the myriad choice of urban facilities that cities afford. The strategic design task for a sustainable pedestrian movement is to build new spatial structures that solve the problem of urban fragmentation. The aim would be to harness urban development sites for their full economic and social potential by building local 'movement economies' based on powerful pedestrian infrastructures.

Good pedestrian accessibility then becomes the catalyst for successful urban regeneration. Designing urban layouts that are both globally integrated and locally distinct will bring to urban developments a mix of users – workers, residents and visitors – and with them the essential ingredient for economic vitality, social cohesion, urban safety and investment surety.

Pedestrian movement becomes the key generator of circulation and form. The building must therefore respond to present pedestrian patterns and simultaneously inform a pedestrian friendly environment. The building will have permeable edges to involve passers-by with the activities of the building.



(3.43)

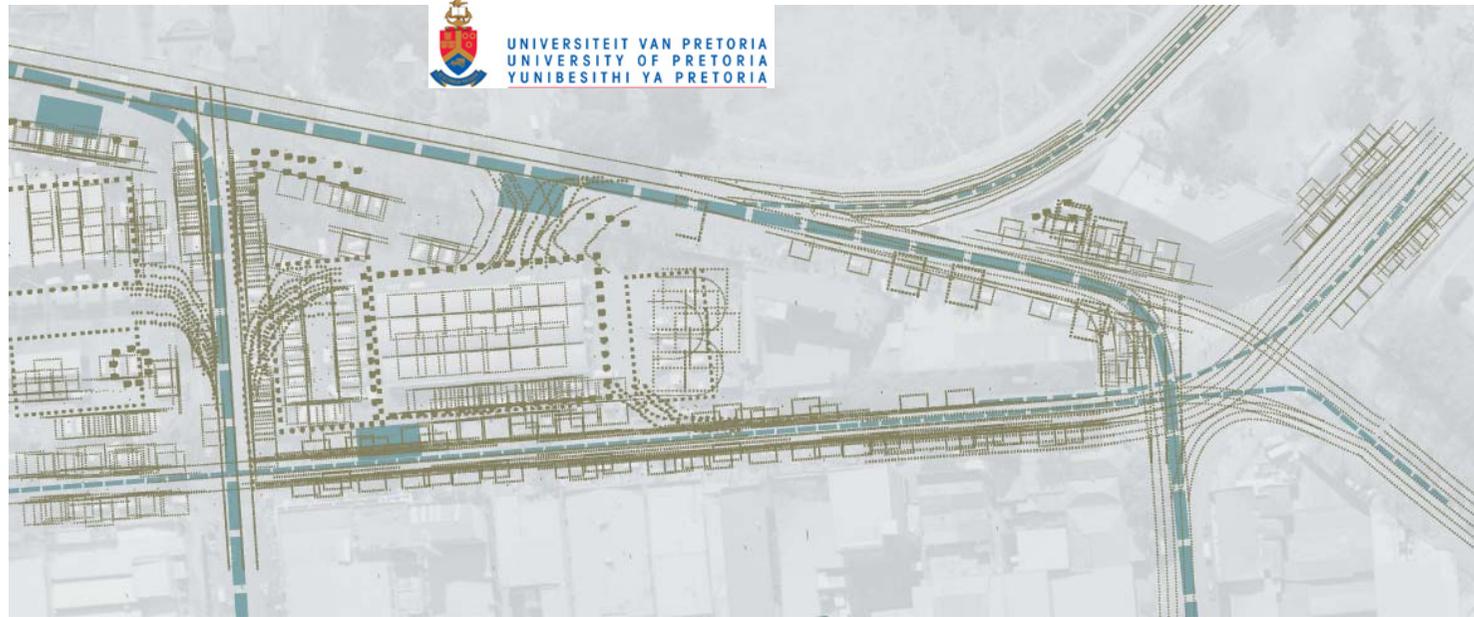


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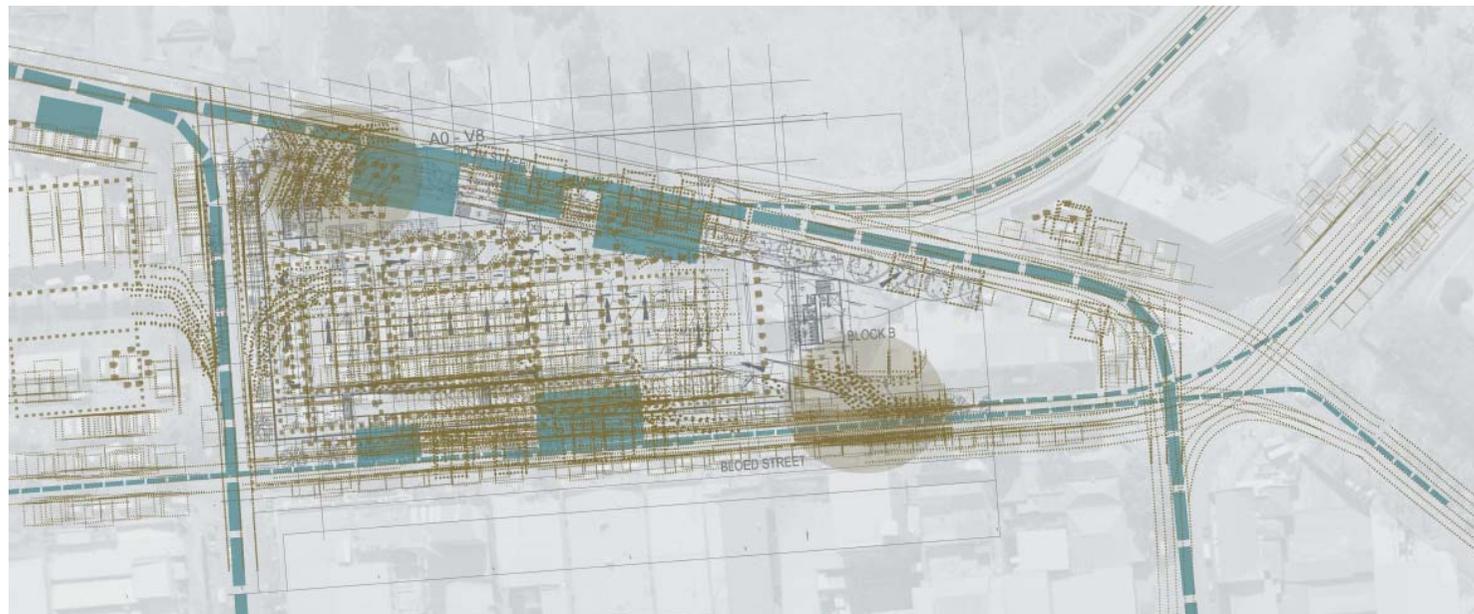
Figure (3.43) & (3.44):

Photo's of the taxi rank (February 2007) being the key generator of pedestrian activity around the site

Figure (3.45):
 Existing bus and taxi routes around the site
Figure (3.46):
 Future bus and taxi routes around the site

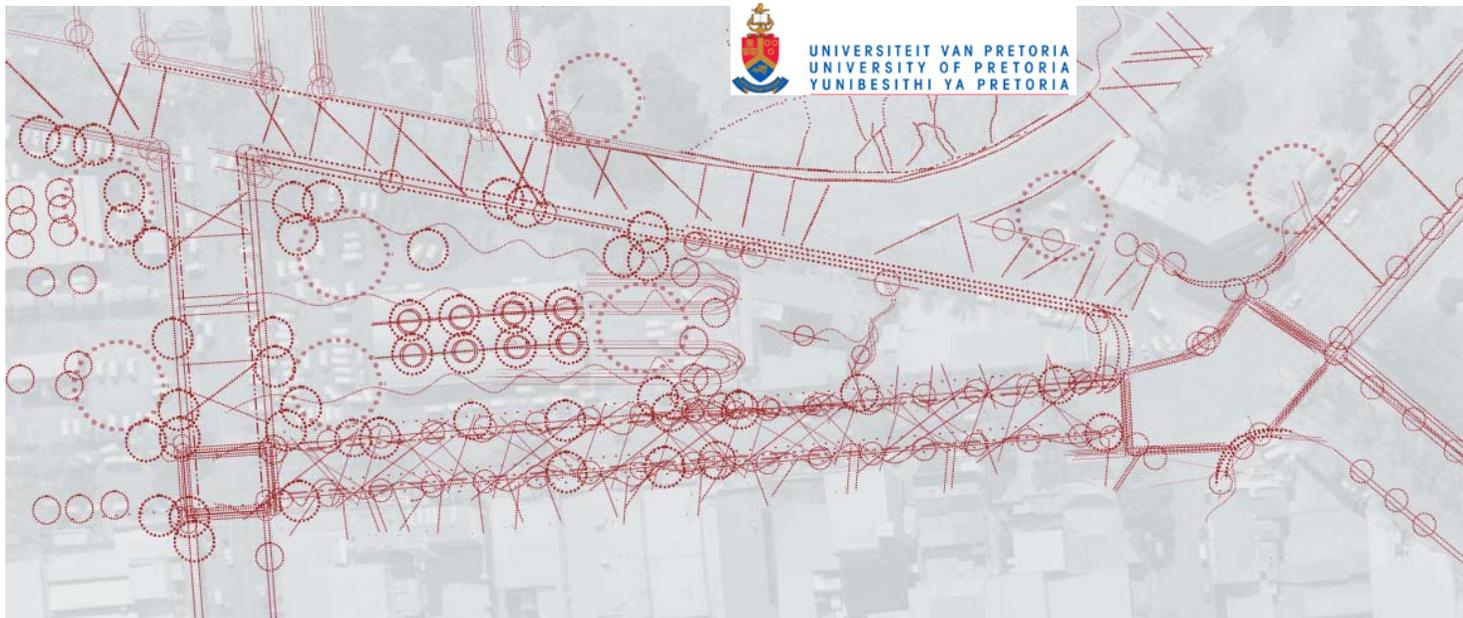


(3.45)



(3.46)

- 
PRIMARY AND SECONDARY BUS ROUTES
- 
BUS STOP
- 
TAXI ROUTE AND UNDEFINED STOP
- 
TAXI PARKING & PICK-UP

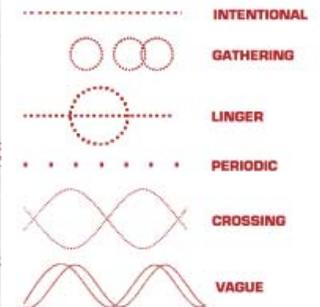


[3.47]

Figure (3.47):
Existing pedestrian circulation patterns around the site
Figure (3.48):
Future pedestrian circulation patterns around the site



[3.48]





(3.49)

Figure (3.49):
Artist impression of the new taxi facility in Bloed Street

Figure (3.50):
Position of site in relation to the new development

Figure (3.51):
Relocation of the existing taxi rank



(3.50)

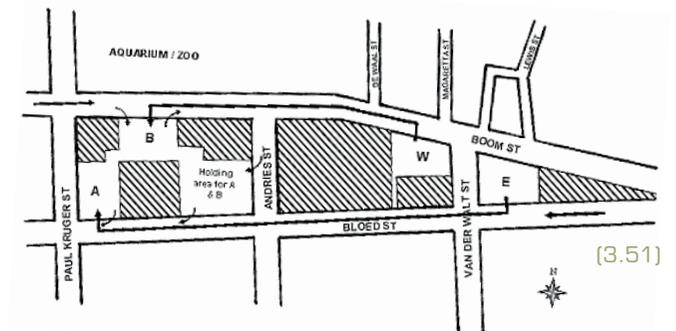
d Adjacent buildings

Construction activities for the Bloed Street Taxi Retail Park will start in April 2007. The expected opening of the Bloed Street Mall is 24 October 2008.

The Bloed Street Mall development will entail the following:

- Taxi ranks
- Motor related facilities, i.e. tyre fitment centre, workshop, spares, etc.
- Informal trader stores
- 22 000m² retail shops

The relocation of the existing taxi ranks and informal traders will take place between February and April 2007. The temporary ranking facility will be positioned in the block surrounded by Bloed, Boom, Andries and Paul Kruger Streets.



(3.51)

3.5.3 Macro Climate

Topography: The study area falls in a gentle slope from the south-east to the north-east at about 1:35, with a mean level of 1 300m above sea level at the intersection of Boom and Bloed Street. The slope places no constraints on development in the area (Van der Waal 1990:10).

Geology: Geologically the study area is of Precambrian origin. It forms part of the Transvaal system, and more specifically the Daspoort Stage of the Pretoria series.

The geological map (figure 3.52) shows most of the study area underlying geology as composed of localised Andesitic laval with interbedded agglomerate, shale and tuff (Van der Waal 1990:13). A zone of localised shale and siltstone, with quartzite and grit at the top, penetrates the area from the east-west. The broader geological structures are shown in figure... For construction purposes 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.

Climate: The area is characterized by generally high temperatures. Relatively high local humidity frequently combines with high afternoon temperatures in summer to cause an uncomfortable heat.

Rainfall is seasonal (summer rains), with an average of 741mm per year. Mostly precipitation occurs in thunderstorms with rates of around 90 to 100mm per hour. Hailstorms are fairly common and can be severe (City of Tshwane Weather Services).

Average annual cloud cover is 33%, varying between 13% in July and 54% in December. Prevailing winds are calm, and blow from the north-east in the morning, backing to north-west in the afternoon. During winter occasional cold snaps bring wind from the south, while in summer thunderstorms are accompanied by turbulent wind patterns (City of Tshwane Weather Services).

3.5.5 Micro Climate

On a micro-climatic level the proximity of the Apies River valley contributes to some site-specific conditions. For instance 89 days of frost per year are recorded on average in these areas, as apposed to 60 days at the weather bureau up in Pretoria. Lower averages for the winter months are also recorded and the diurnal range of temperature difference between day and night exceeds the Pretoria average (ibid).

From the point of view of urban settlement the main problems posed by the climate within the precinct area are the high summer temperatures, the high diurnal temperature ranges, the intensity of precipitation when it occurs, and the inefficient dispersal of air pollution.

Pollution must be addressed in broader metropolitan context, with emphasis on prevention. The other climate factors will be addressed through efficient climatic design of the building, with emphasis on building mass that counters diurnal temperature movements, shade and shelter against heat and precipitation and the use of appropriate materials.

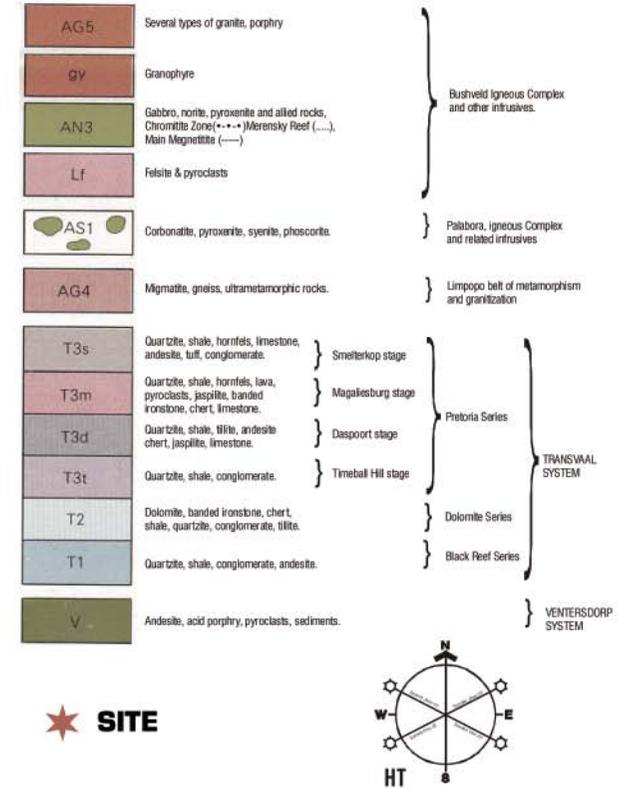


Figure (3.52):
Geology map of the greater City of Tshwane

(3.52)

3.6_Constraints and Possibilities

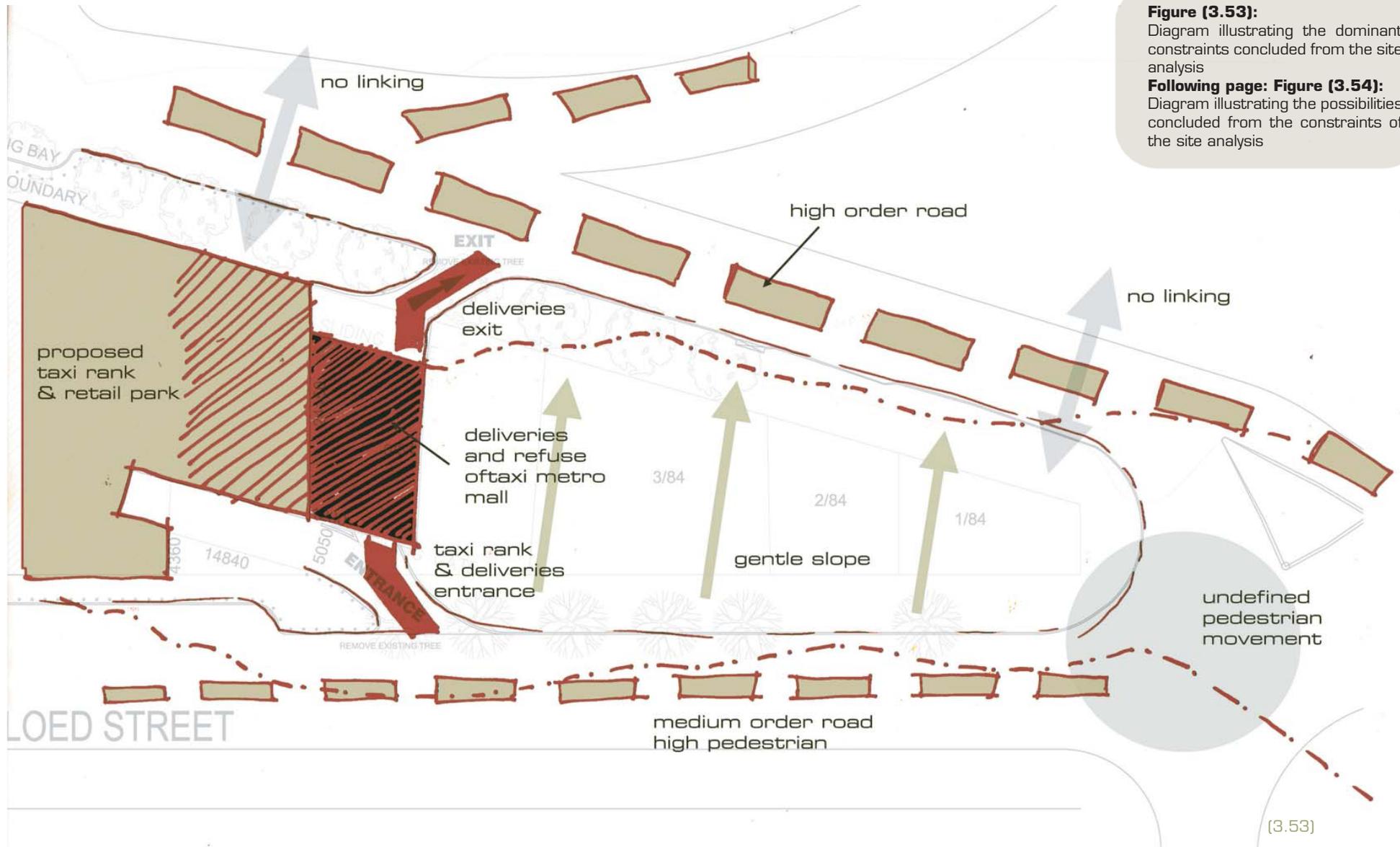
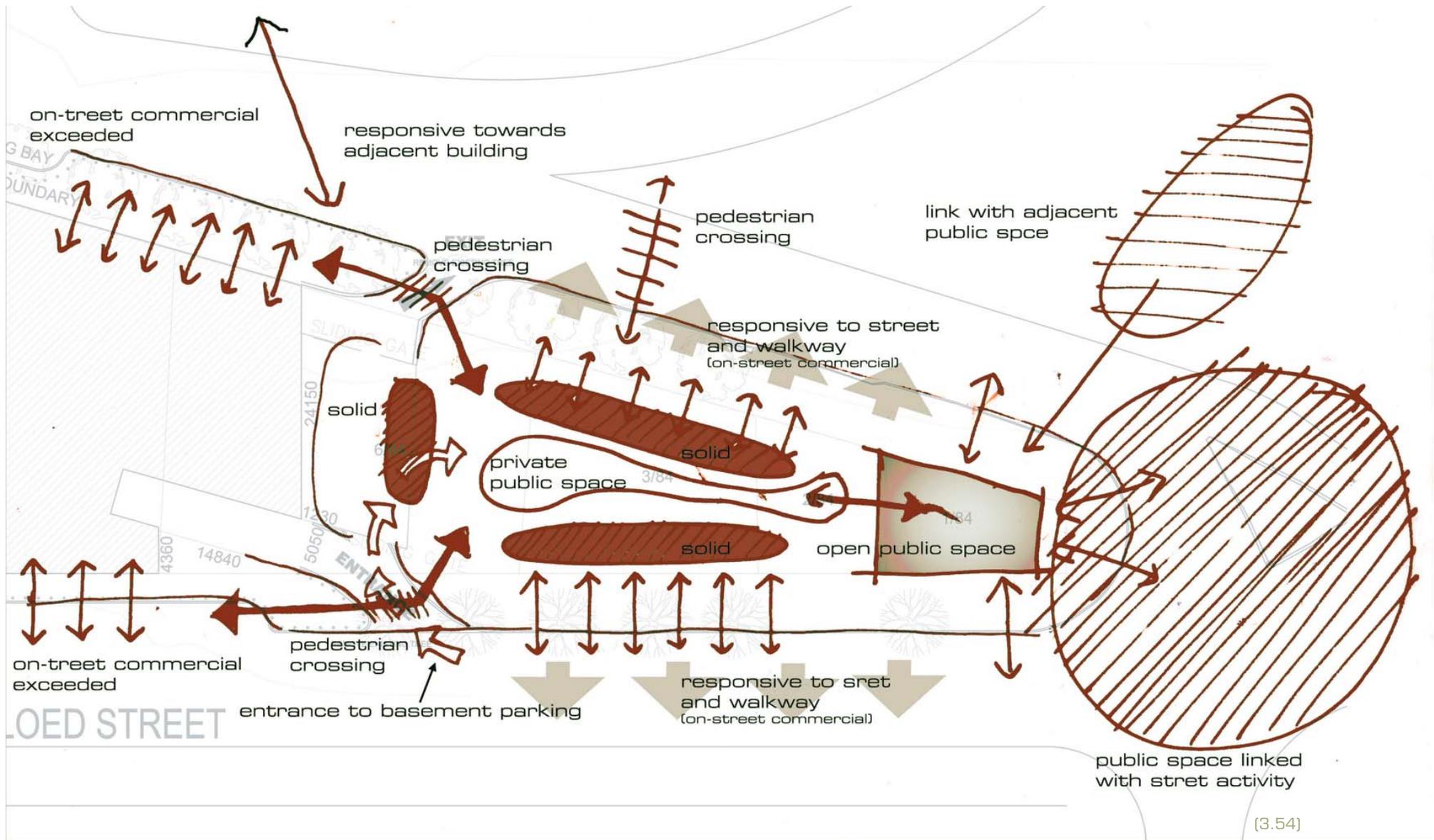


Figure (3.53):
 Diagram illustrating the dominant constraints concluded from the site analysis
Following page: Figure (3.54):
 Diagram illustrating the possibilities concluded from the constraints of the site analysis

(3.53)



3.6.1 Constraints summarised:

Bloed Street consists of medium order traffic and high order pedestrian patterns.

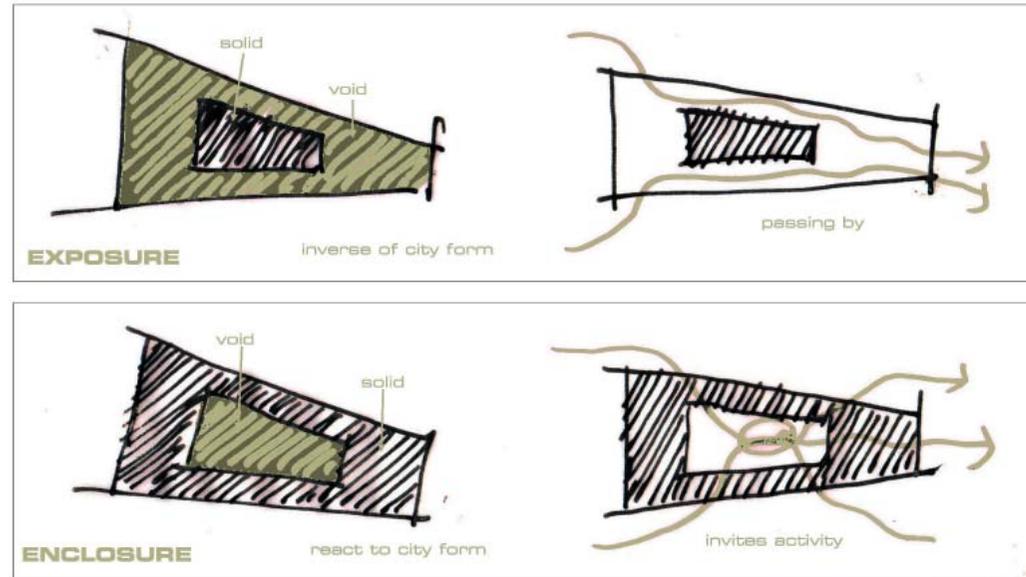
The intersection has ill-defined pedestrian movement and circulation.

The entrance and exit lanes to the proposed new Taxi Retail Park blocks direct interaction between the two interventions.

The delivery and refuse area of the proposed new Taxi Retail Park is located at the west end of the site and also blocks direct interaction between the interventions.

Boom Street is a high order traffic road, with less pedestrian activity.

The gentle slope of the site, although not constraining any development, must be carefully considered during stormwater design.



(3.55)

Figure (3.55):
Concept sketches indicating the relationship between exposure and enclosure to city form