


figure 20:01
Photograph collage of site, with
northern view of the surrounding
context



CONTEXT STUDY

Urban Analysis

The urban areas of South Africa have undergone radical changes since 1994. The biggest metropolitan cities, like Johannesburg, Cape Town, Durban and Pretoria, have surely felt the changes most intensely.

Public space is being occupied in new ways. Previously uncluttered, sanitized urban parks and open spaces are now dotted with braziers and campfires, and used for storing goods overnight or conducting commercial transactions; pavements have become crowded with hawkers, tailors and hairdressers; streets are congested with taxis.

The spaces it vacates, whether commercial, retail or residential, are boarded or bricked up, "mothballed" against occupation by the poor. (Bremer 2005:6).



figure 20:02
Photograph view from site
towards the east of Tshwane



Open sites which are boarded up or bricked in between buildings, creating harsh environments, are still available to be transformed into interactive spaces. Rather than demolishing buildings or evicting traders to create open space, new layers can be activated when a function is connected to a dead or underused space.

According to Jan Gehl, the built fabric creates physical and psychological boundaries which in essence define the edges of open spaces. These spaces take the form of streets, pavements, alleys and urban parks (Gehl 1987:52).

The precinct's pavement is currently used by informal traders selling food and daily necessities to pedestrians en route to public transport and the commercial areas. An opportunity exists for an architectural intervention utilizing dead or under-used spaces, that can form part of the urban fabric by connecting the street to the surface of the site.



figure 20:03
Collage of food sold in the
Pretoria CBD

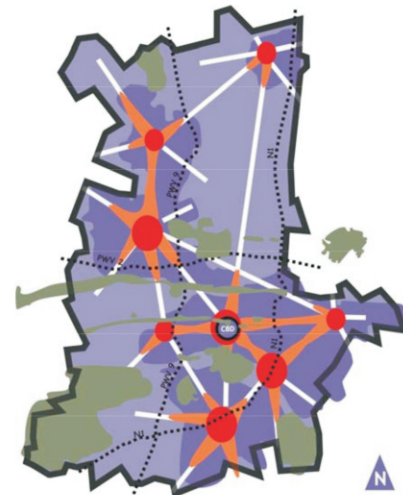
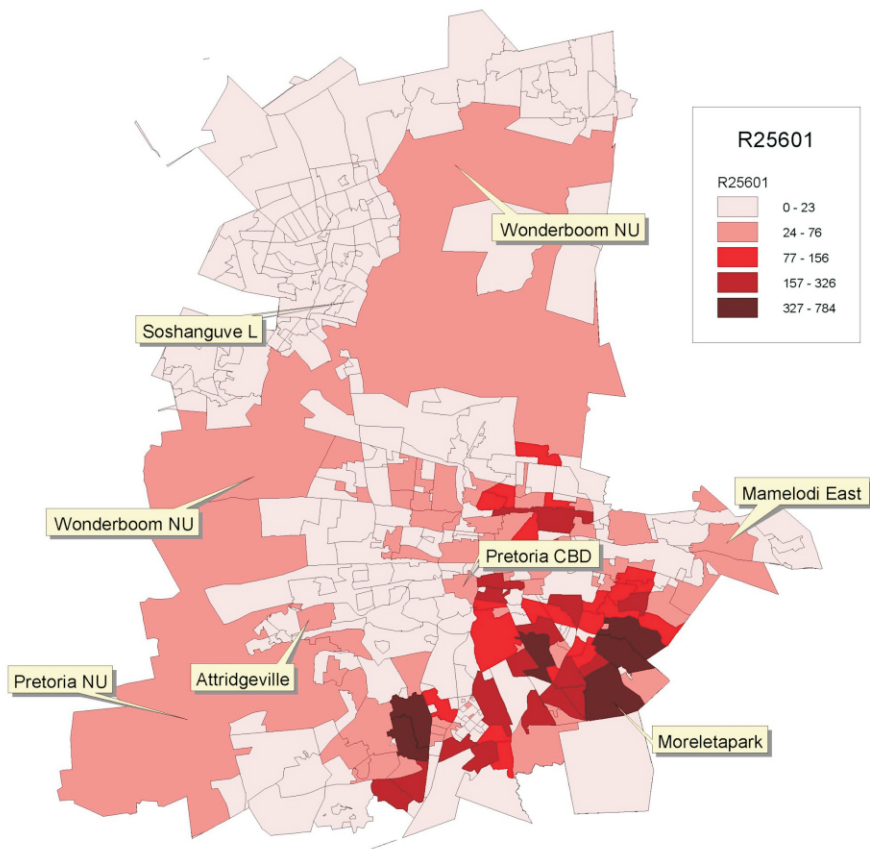


figure 20:04 (right)
Income vs. node

figure 20:05 (left)
Tshwane multi-nodal form

Income vs Nodes

The Pretoria CBD, unlike suburbs like Moreleta Park, Menlyn, Brooklyn and Centurion, has seen a rapid decline of income in relation to the node, due to businesses moving out of the CBD. The City of Tshwane Spatial Development Plan for 2010 aims to re-establish the Pretoria CBD as the main income node connected to the other nodes and the city of Johannesburg (Municipal Demarcation Board S.a.).

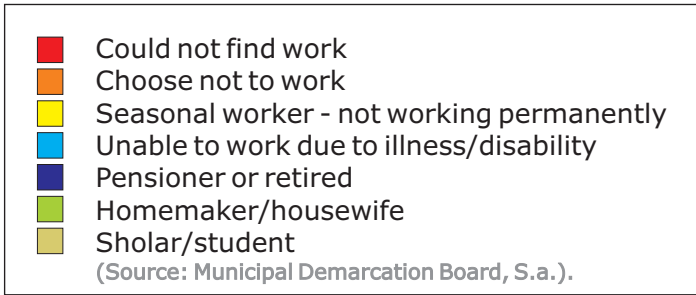
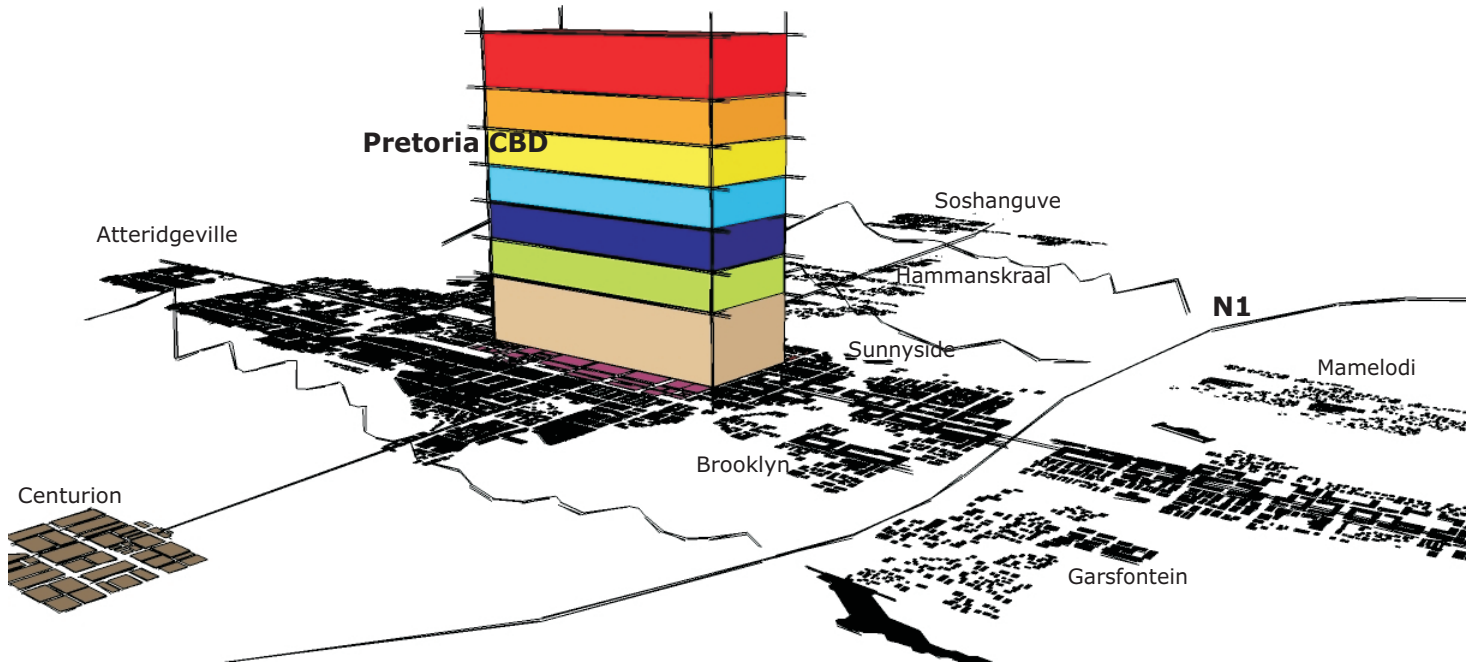


figure 20:06
 Map; indicating
 reasons for not
 working

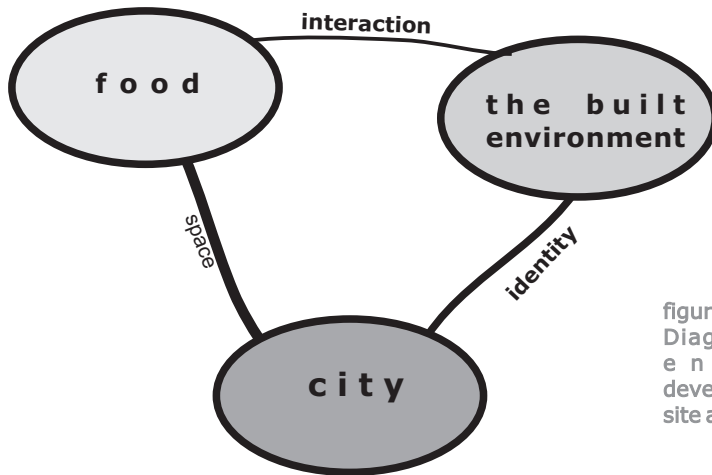


figure 20:07
Diagram explaining
envisioned
development for the
site and context

Throughout history, much in the built environment has been designed around food. Currently in South Africa, and globally for that matter, plans to regenerate sectors of the urban economy have been organized around the production and consumption of food. In many deteriorating areas, the socio-economic situation has been changed by the opening of new cafes, lounges, restaurants and speciality food stores.

The idea of this project is thus to investigate a place for educating people in the food production process, with space for interaction and consumption, creating an iconic cookery school where the process of gastronomy can be displayed and the products of performance be sold to the public. This would be a place where local food products and the community can be combined with architecture to create and promote local development. Success is envisioned as a space with regional identity, a space where market appeal is combined with architecture to turn an underused site into a destination for food and city lovers.

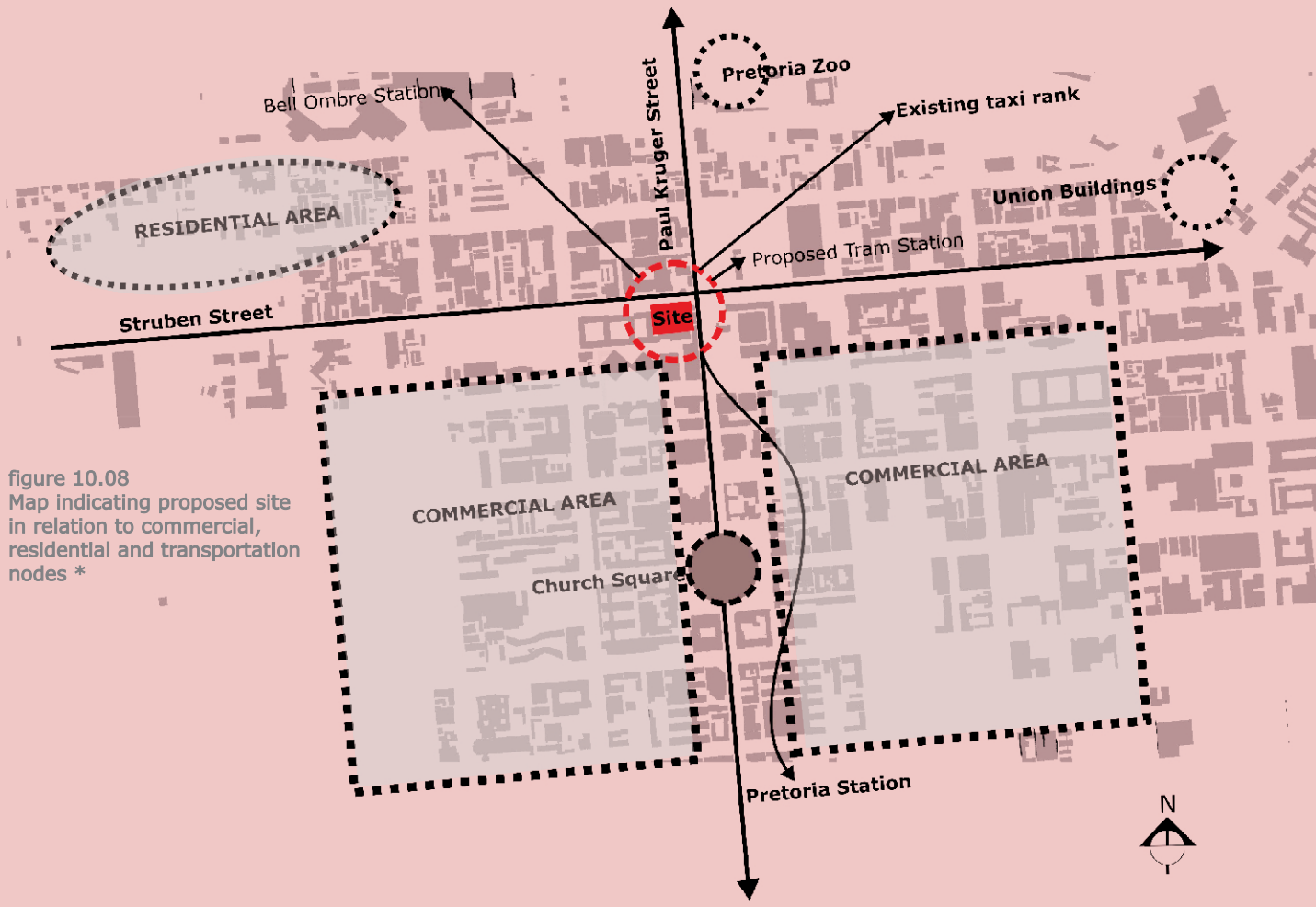


figure 10.08
 Map indicating proposed site
 in relation to commercial,
 residential and transportation
 nodes *

Site Selection

The site chosen is located in Struben Street, north of Church Square in the CBD of Pretoria. Struben Street passes the northern edge of the site and stretches from the residential node in the west all the way towards the Union Buildings in the east. Paul Kruger Street forms the eastern Edge of the site, connecting Church Square with the Pretoria Zoo to the North.

Site Criteria and Motivation

Proximity to existing and future mass transit facilities.

Proximity to residential nodes

Proximity to educational nodes

Proximity to existing commercial nodes

Visual impact, as the building will have to sell itself and its function

The Site has the following strategic advantages.

It is centrally located in the CBD.

It is located between the residential and commercial nodes.

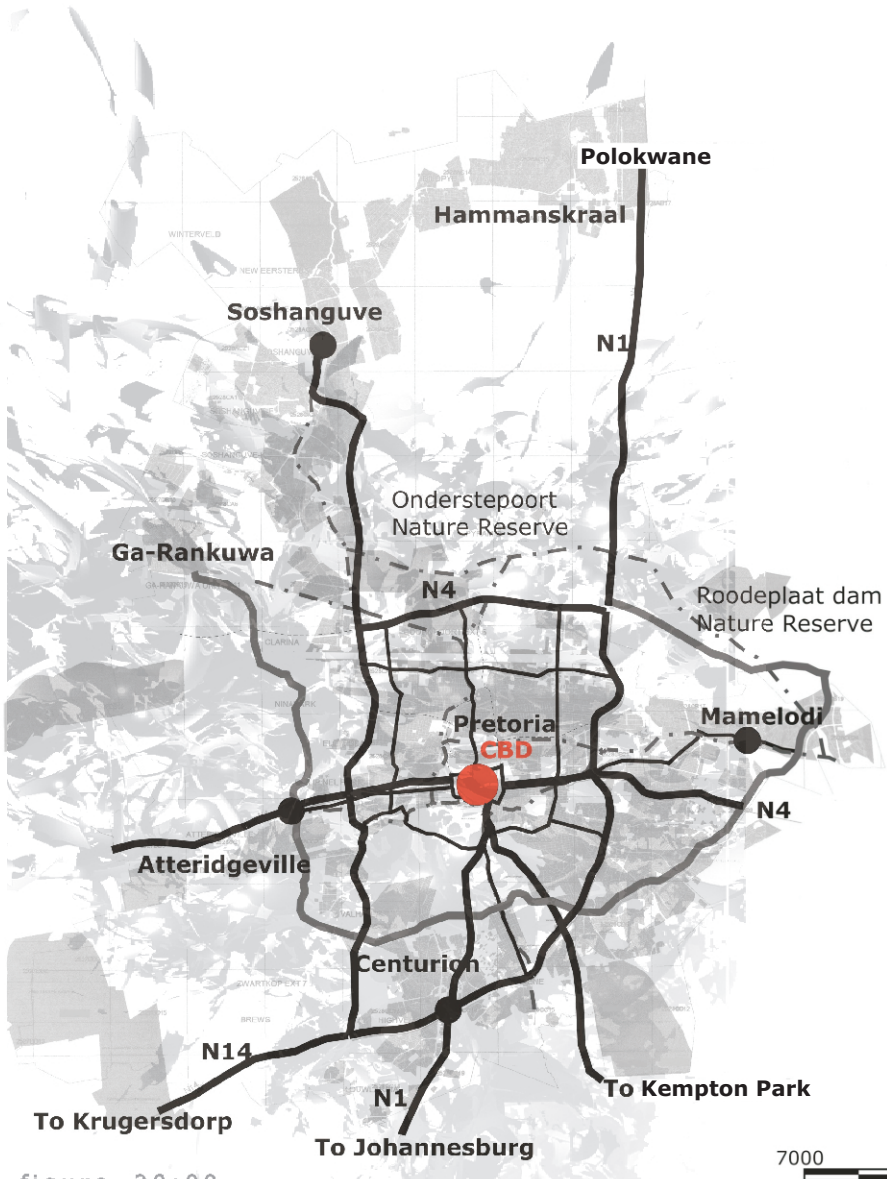
It is within walking distance from the Belle Ombre station and the Pretoria taxi rank, and is right across the street from the proposed tram system.

It is close to museums and local schools.

It is within walking distance from Pretoria Zoo, the second most visited place in Pretoria.

Parking facilities already exist adjacent to the site, and more parking is proposed on immediately surrounding sites.

The site is within walking distance of Church Square.



Road Network Connecting the Site

The CBD is directly connected to major highways: the N1 (north/south), N4 (eastwards towards Nelspruit), R21 (towards O.R. Tambo International Airport) and the N14 leading towards Krugersdorp.



figure 20:09
Site location and
main roads*

Private and Public Transport

Although many people live west of the Pretoria CBD, most people in the city work east of it and in Johannesburg. The largest majority of people commuting from or to the CBD use either taxis or private transport.

The Gautrain rapid rail link aims to connect the city of Tshwane to Johannesburg, easing the traffic load on the major roads. A Tshwane tram system is proposed, connecting the Pretoria CBD with other major suburbs and with a proposed station across the street from the site.

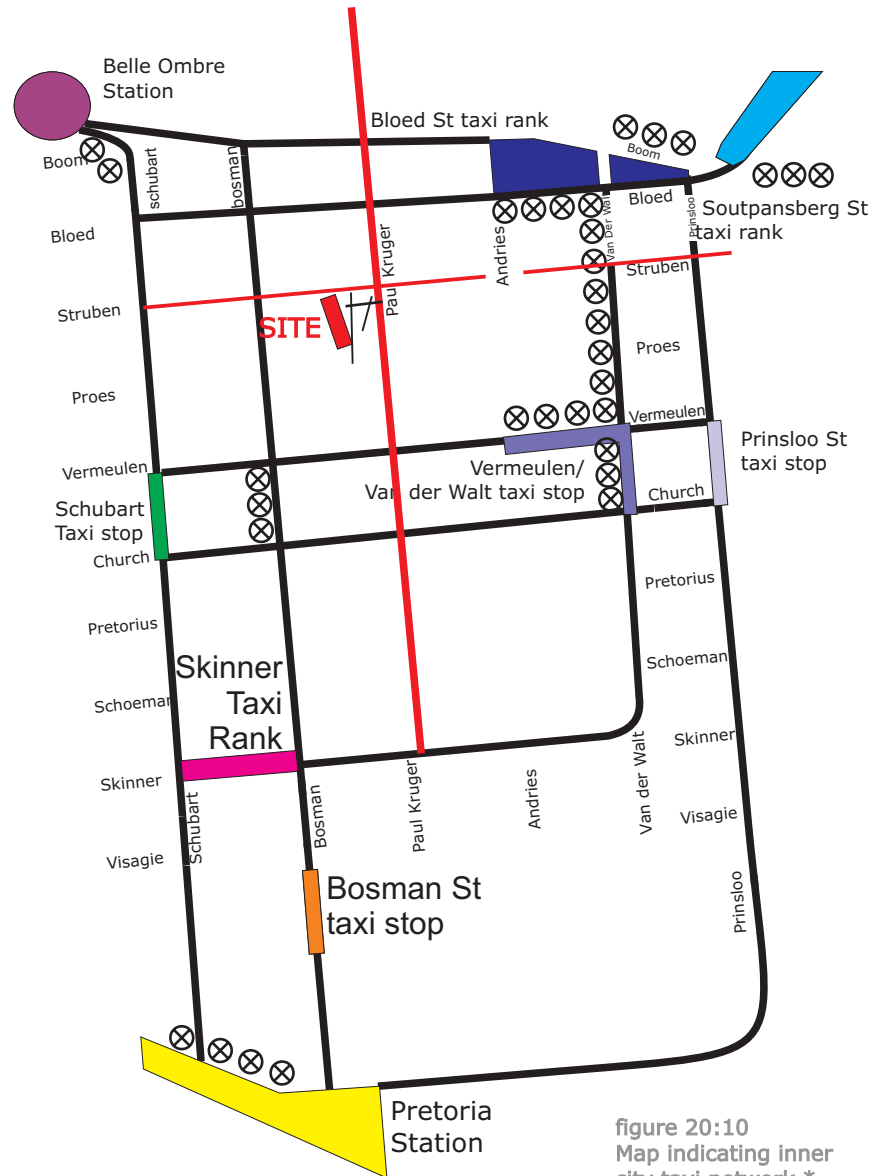
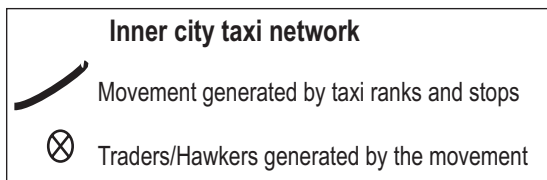


figure 20:10
Map indicating inner city taxi network *



figure 20:11
 Current and proposed places of
 interest surrounding the site *



The existing parking area located in Struben Street, east of Paul Kruger Street, was chosen for this dissertation as it provides the necessary requirements for an architectural intervention. Currently the site is underused, and functions as an open parking area for the SA War College. It is a barren, unaltered space between high rise commercial buildings and heritage buildings. It is connected to educational facilities such as the Transport Museum, the War Museum, and the Post Office Museum, and is within walking distance of the Pretoria Zoo and Church Square. It is also a point of intersection between the commercial and residential areas of the CBD en route to major public transport nodes of Pretoria.

The site is flat, with no significant topographical features. It has a one metre fall from the southern edge towards the northern edge. The site has previously been cleared and covered with a tar surface, and serves as an open air-parking area for the SA War College. Two rows of six, indigenous trees each have been planted in the middle of the site to provide shade for the cars. Otherwise, vegetation is nonexistent. The northern edge of the site is separated from the public street level by a two-meter-high steel palisade wall.

figure 20:12
Photograph collage showcasing dead or under-used space on the site

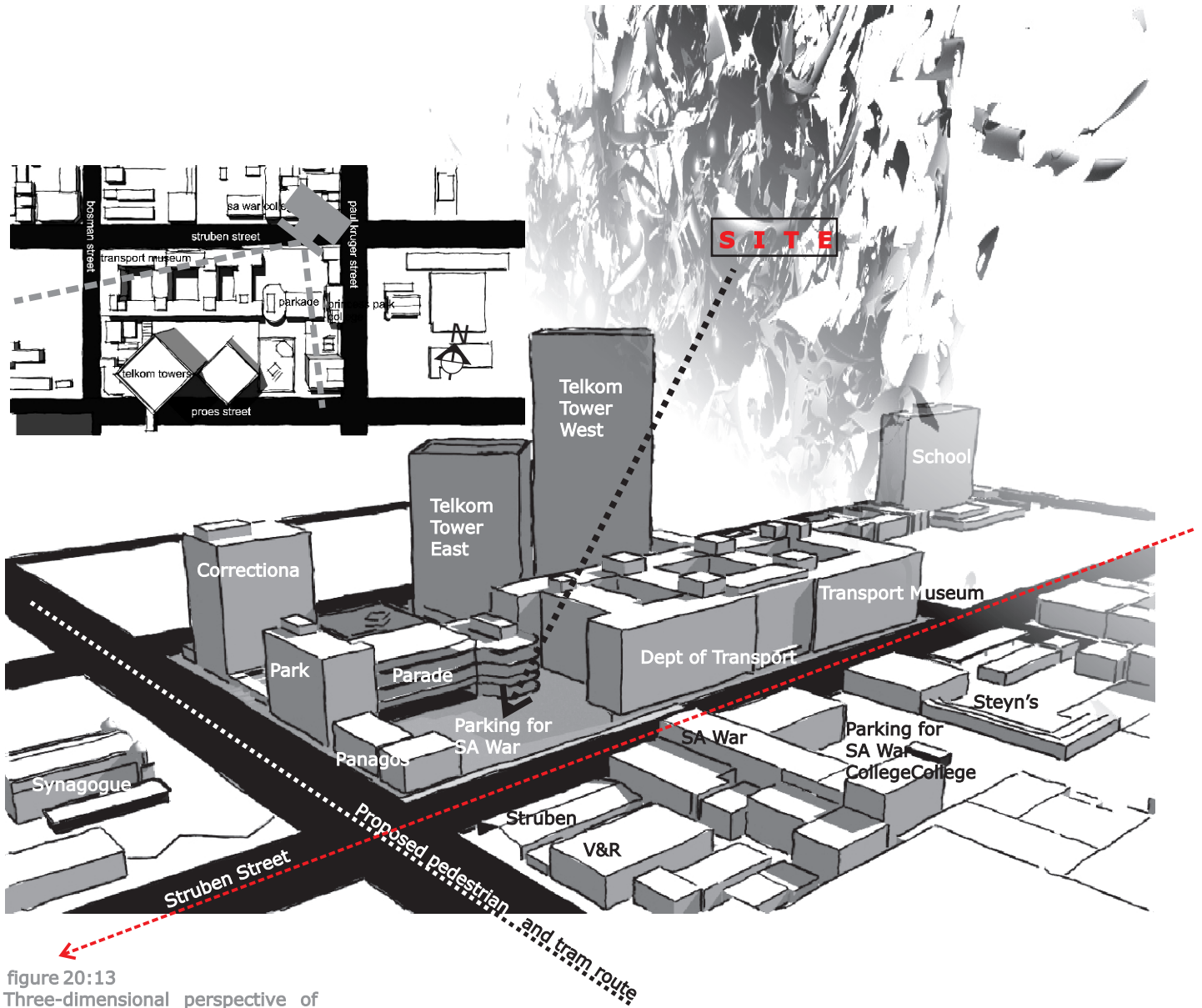


figure 20:13
 Three-dimensional perspective of
 the site and surrounding areas *

Visual Impact

The site will have a strong visual impact because:

- It is centrally located in the CBD and next to the Telkom Towers.
- Struben Street, forming the northern edge, is proposed as a government boulevard connecting to the Union Buildings.
- the Panagos and Synagogue heritage building form the eastern edge.
- the SA War Museum and Transport museum are directly opposite the site.
- the site is connected to the proposed pedestrian route connecting the Pretoria Zoo and Church Square.

Views from the site:

- Directly to the North, the Pretoria Zoo and natural landscape are visible.
- To the east, the Panagos and Synagogue heritage buildings are visible, with a view of the Union Buildings in the background.
- The Telkom Towers form the south-western view.
- Directly behind the site, what was previously the five-story Peugeot building forms the southern view.

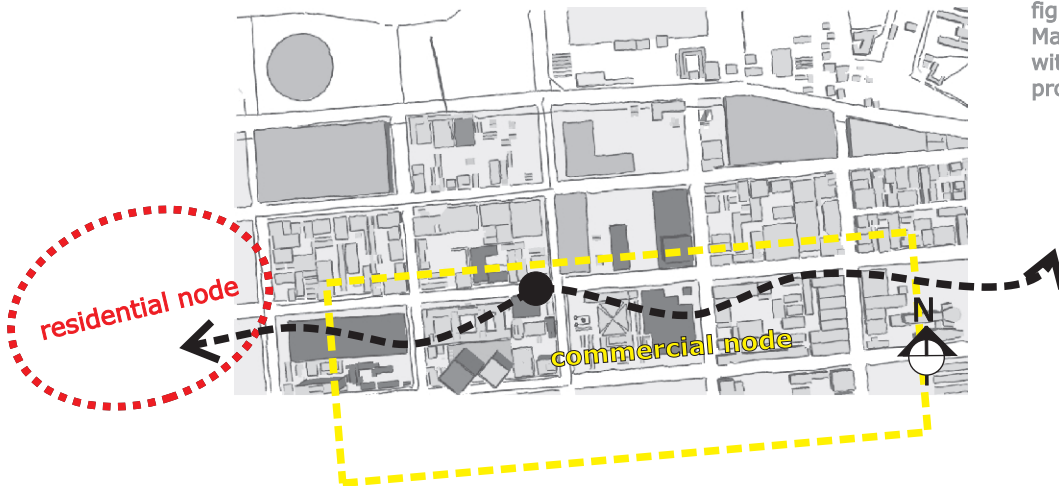


figure 20:14
Map indicating residential link
with commercial link and the
proposed site*

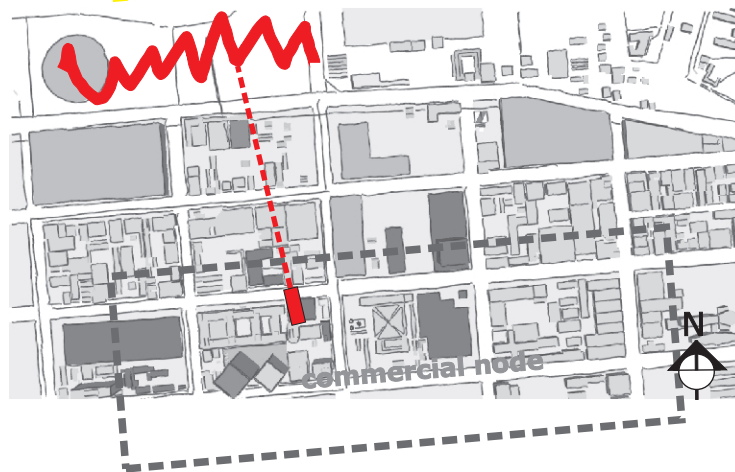


figure 20:15
Map indicating view of natural
landscape connected to
orientation of the proposed
building *



figure 20:16
Map with linkage networks
between the proposed site
and places of interest, public
transport and educational
facilities *

- Site
- Places of interest
- Public transport
- Education

Table 1: Swot Analysis of site

Strengths	Weaknesses	Opportunity	Threat
Strong commercial activity in Stuben St and Paul Kruger St	Companies are investing in other suburbs	Reinforce commercial activity in Struben Street and surrounding streets	The CBD could lose all its commercial strength
Reasonable amount of light industrial activity in Struben St between Bosman St & Schubart St	Little or no shopping or formal eating facilities in streets other than Bloed St	Create formal and informal retail facilities in streets other than Bloed St	
Fair amount of buying power	Buying power in lower income groups only	Improve retail facilities to draw wide range of income groups	
Hawker stalls add to street character	Stalls make pavements cluttered and impede pedestrian traffic	Widen pavements and provide trading space.	
Pedestrian traffic in Church St and Struben St via transport nodes	Pedestrian routes underdefined and in deteriorating state	Strong pedestrian routes can be established between nodes	Sterile atmosphere threaten if only few people are on streets
Victorian, Art Deco and Modernist architectural heritage buildings	Heritage buildings neglected and in deteriorating state	Heritage buildings can be used as source of tourism	Heritage buildings can be lost to future generations
Numerous educational institutions	No street activity once schools and businesses close	Create an academic hub for the city	Lack of safety for children are not particularly catered for
Large Open Space: school sports field	Access to open space restricted	Improve access to sports fields and other public spaces after school hours	
Mix-Use in buildings: government, education, commercial, light industrial	No residential premises	Attract residential development	
Fair number of restaurants & takeaways	Lack of upmarket shops and food outlets		
Area well served by bus and taxi routes	Taxis impede orderly traffic flow and cause congestion, few bus stops	Regulate taxi lanes	
	Lack of human scale and proportion around Telkom Towers and Dept of Transport building		
Street frontages of buildings generally in good or average condition	Back yards and backs of buildings generally in bad condition	Attract more light industry to area	Light industry could add to visual deterioration of area
Little vacant space other than sports fields	Vacant spaces other than sports fields used for parking or no activity	Improve usage of vacant spaces	
Swot Analysis of Precinct	Lack of human space		
	No public toilet facilities	Install public toilet facilities	
	Lack of street furniture	Create public surface	
	Insufficient parking space	Create more parking space (e.g. underground parkades)	Parking areas do not add to urban fabric, but can attract people to area
	Drug problem prevalent according to people spoken to		
	Unemployed people gather in Struben St in the hope of finding employment	Create opportunities for economic upliftment	
	Perceived lack of safety	Increase police presence and lighting in area	Lack of safety deters people from entering area
	Transport Museum closed	Opportunity to re-open	
Lack of tourist attractions in area	Create tourist attractions		



figure 20:17
Map indicating
current site usage *



figure 20:18
Existing open-air parking lot in
the CBD of Pretoria

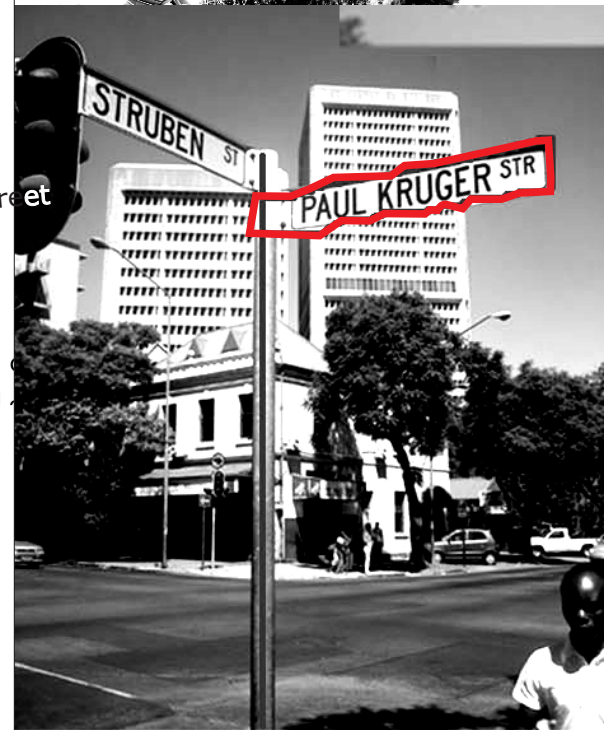


figure 20:19
View of Panagos building and
Telkom Towers.

Table 2: Current Usage of Surrounding Sites

No.	Erf no	Building name	Function
1	2885	Parking for SA War College	Government (Parking)
2	4/102	Panagos Building (group of buildings)	Commercial (retail: restaurant, shops, offices)
3	2686	Ex-Peugeot Building parkade	Commercial (parking: Telkom)
4	2686	Pawn shop & Princess Park College (ex-Peugeot offices)	Commercial/institutional (retail: pawn shop & educational)
5	2894	Government Printer sales office & other shops	Government/commercial (retail: maps, hair salon, liquor)
6	2894	Correctional Services (Masada Building)	Commercial (retail: restaurant/shops) & Dept of Corr Services
7	3264	Telkom Tower East	Commercial (offices: Telkom)
8	3264	Telkom Tower North	Commercial (offices: Telkom)
9	3264	Telkom West Wing (ex-Hilda Mansions)	Commercial (offices: Telkom)
10	1/139	Molemo Building (target High School)	Institutional (educational: private)
11	2861	Dept of Transport (ex-Forum Building)	Government (offices: Department of Transport)
12	1/3297	Steyn's Auto Ford	Commercial (retail: car dealer)
13	R/3333	SA War College (ex-Protea Hotel, ex-Boulevard Hotel))	Government (education & accommodation)
14	R/3333	SA War College (ex-Protea Hotel, ex-Boulevard Hotel))	Government (Education & accommodation)
15	R/60	Struben Street Motors	Commercial (retail: car dealer)
16	3/60	V&R Printers	Light industry (printing)
17	R/19	Old Synagogue	N/A

Table 3: Architectural Language of Surrounding Buildings

No.	Building materials	Style	Height in storeys - estimate	Heritage assessment
1	N/A	N/A	0	
2	Masonry	Victorian/Edwardian	2	High
3	Concrete & masonry infill	Modernism	5	
4	Concrete & masonry infill	Modernism	9	
5	Concrete & masonry	Modernism	1	
6	Concrete with masonry infill	Modernism (1968)	12	Low
7	Concrete with masonry infill	Brutalism	5	Low
8	Concrete	Brutalism	17 & 28	Low
9	Concrete with masonry infill	Art Deco (1930s)	4	Medium
10	Concrete & masonry infill	Modernism	3	
11	Concrete & masonry infill	Modernism	7	Medium
12	Concrete & masonry building & car sheds	Industrial (car sales)	1	
13	Concrete & masonry infill	Modernism (1954)	2 - 4	High
14	Concrete & masonry infill	Modernism (1954)	2 - 4	High
15	Masonry building & steel car sheds	Modernism	2	
16	Concrete & masonry	Modernism	2	
17	N/A		2	High

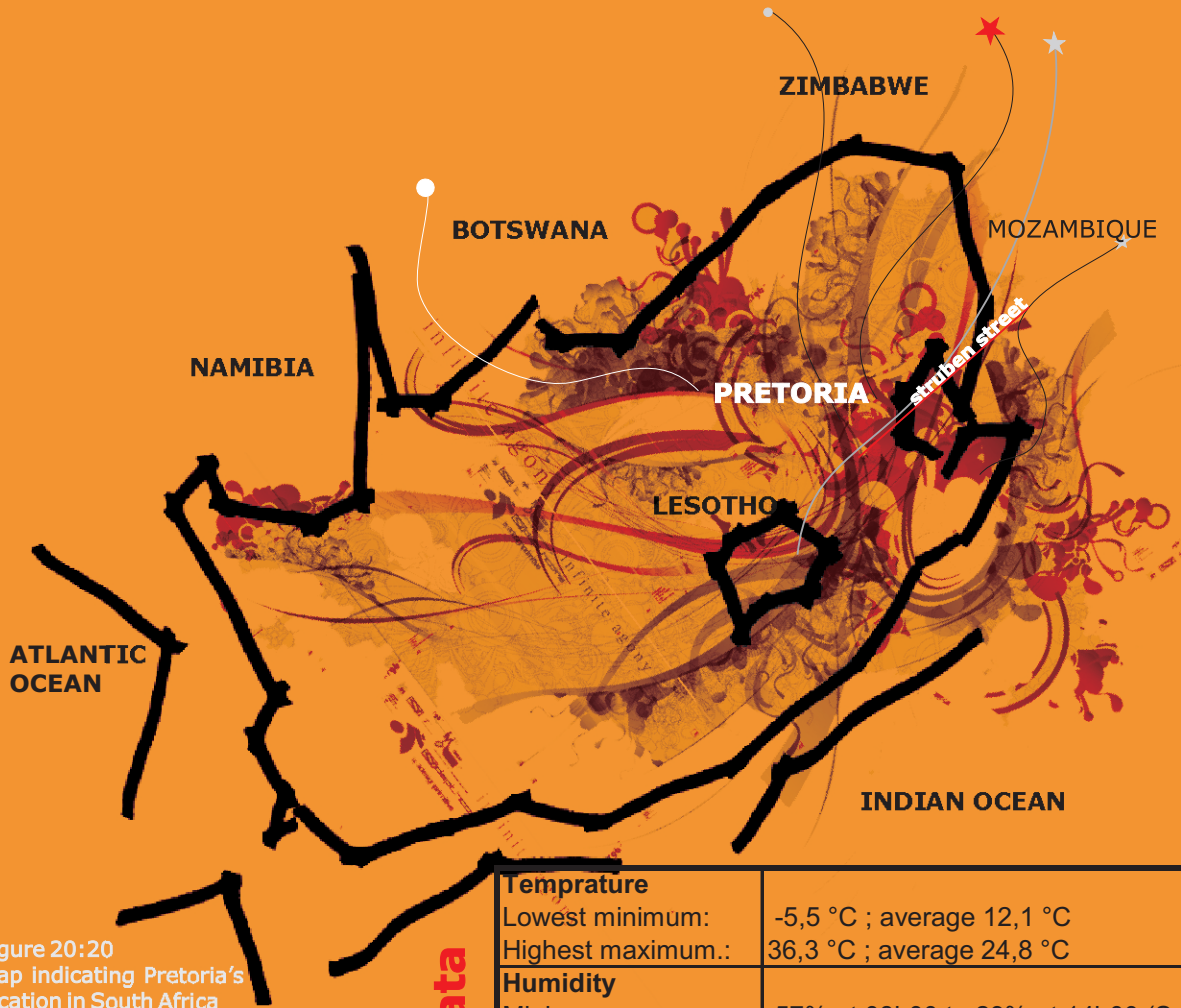


figure 20:20
Map indicating Pretoria's
location in South Africa

Table 4 :Climate Data
(Source: Schulze 1986:49)

Temperature	
Lowest minimum:	-5,5 °C ; average 12,1 °C
Highest maximum.:	36,3 °C ; average 24,8 °C
Humidity	
Minimum	57% at 08h00 to 29% at 14h00 (September)
Maximum	75% at 08h00 to 48% at 14h00 (March)
Rainfall	
Average	674mm per year
Rainfall Region thunderstorms	Between October and April rate of 90 – 100mm per hour
Sun	
Summer sun angle	88 ° altitude
Winter sun angle	44 ° altitude
Cloud cover	
Average 33%	Varying between 13% in July to 54% in December
Wind	
morning	North-eastern direction
afternoon	north-western direction

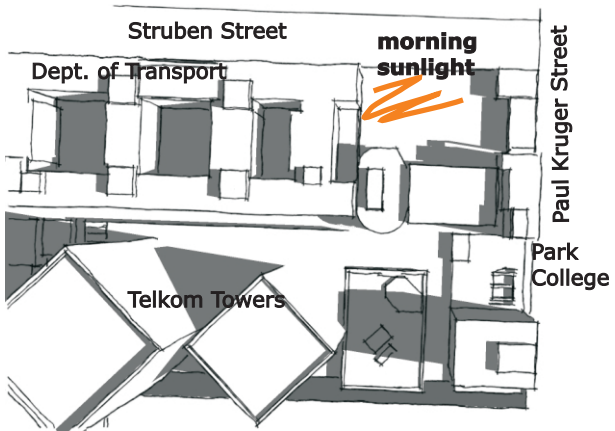
Climate Data

The Pretoria CBD is characterized by generally high temperatures due to thermal mass of the built-up environment.

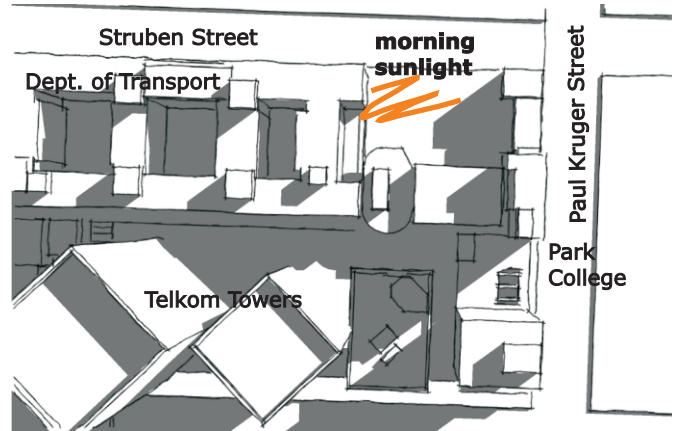
Relatively high local humidity can combine with high afternoon temperatures to cause uncomfortable heat.

The site's climate can be described as unpleasant. Designing for the micro- and macro climate will have to be an important consideration in the surface of the site and the building.

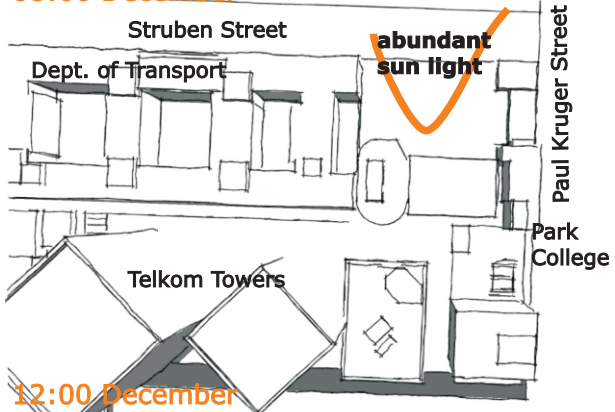
(Source: Schulze 1986:49)



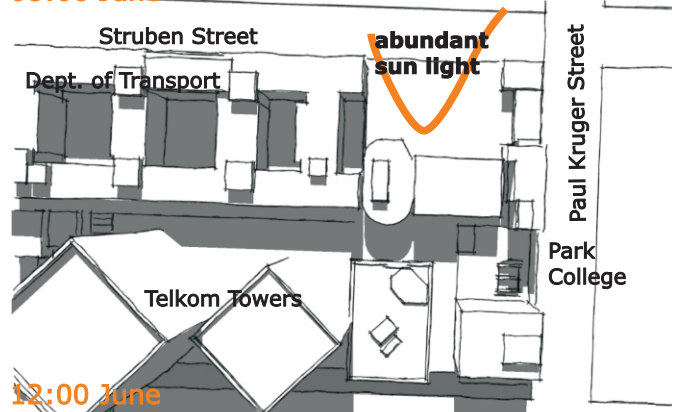
08:00 December



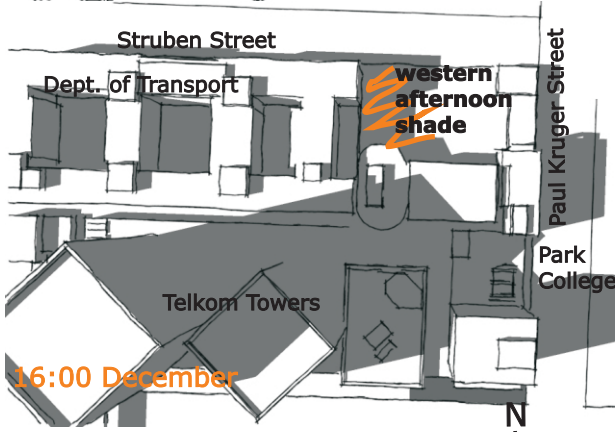
08:00 June



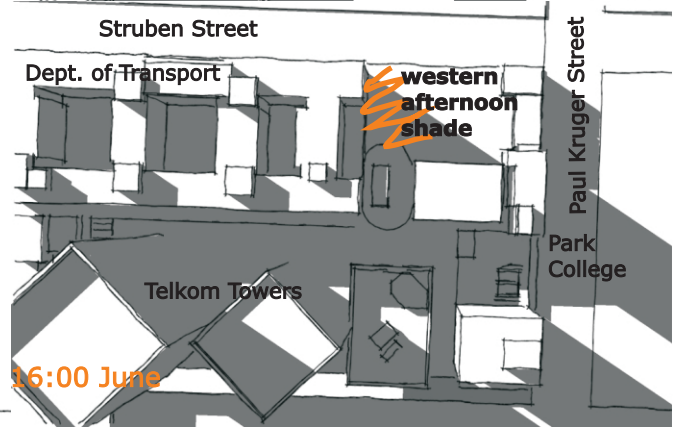
12:00 December



12:00 June



16:00 December



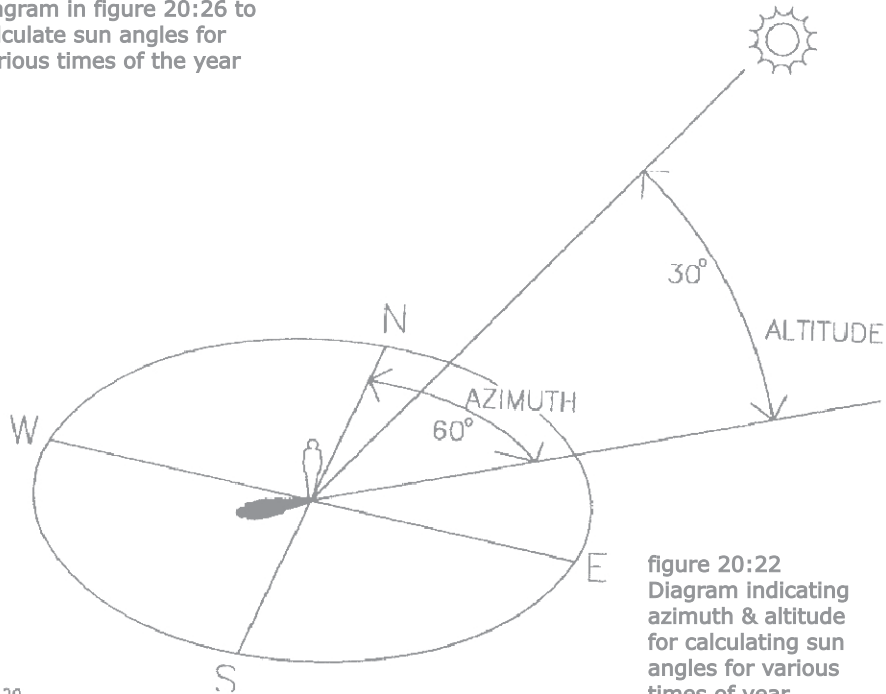
16:00 June

figure 20:21
Sun angle during
December and June on site

Solar Times	06h00	08h00	10h00	12h00	14h00	16h00	18h00
Clock Times	06h18	08h18	10h18	12h18	14h18	16h18	18h18
Azimuth - 21 Desember	112 east	101 east	91 east	0	91 west	101 west	112 west
Altitude - 21 Desember	10	35	63	88	63	35	10
Azimuth - 21 June	N/A	55 east	34 east	0	34 west	55 west	N/A
Altitude - 21 June	N/A	14	32	40	32	14	N/A



Table 5
Table used in conjunction with
diagram in figure 20:26 to
calculate sun angles for
various times of the year

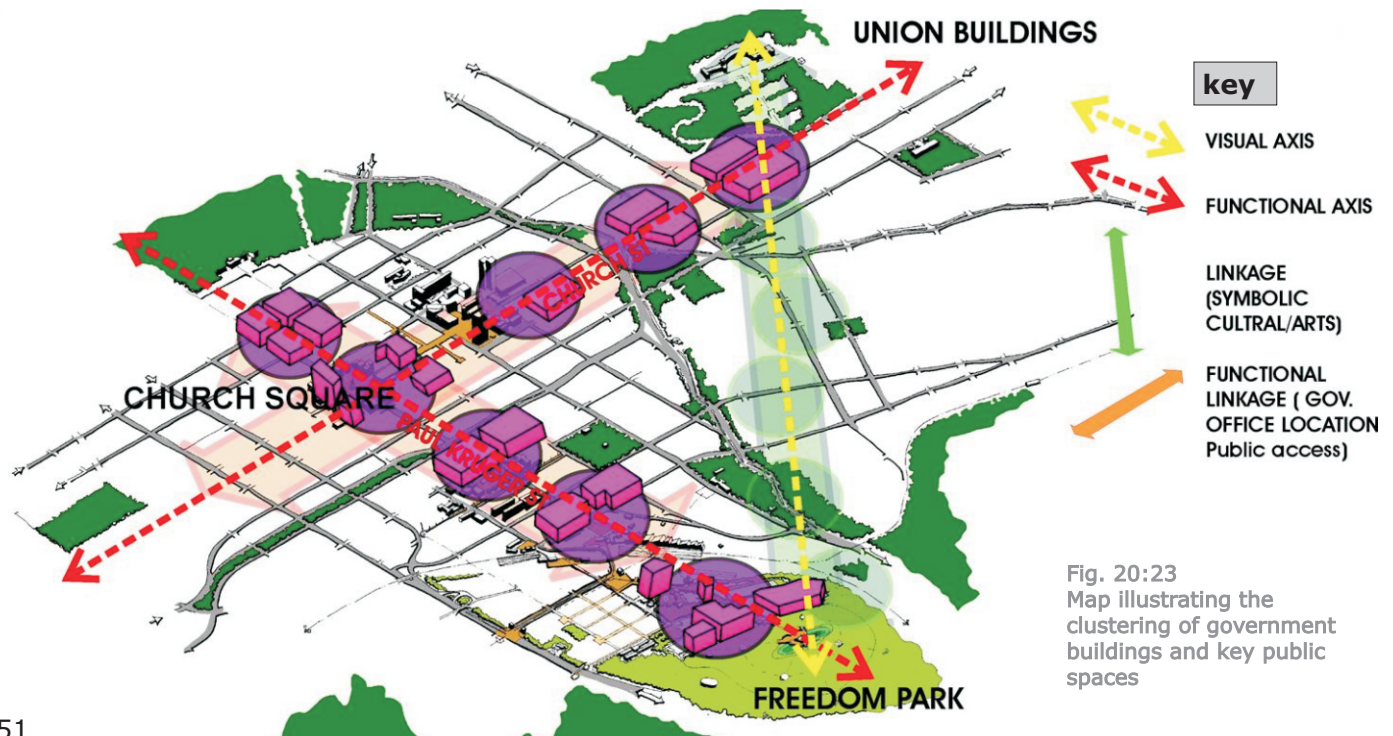


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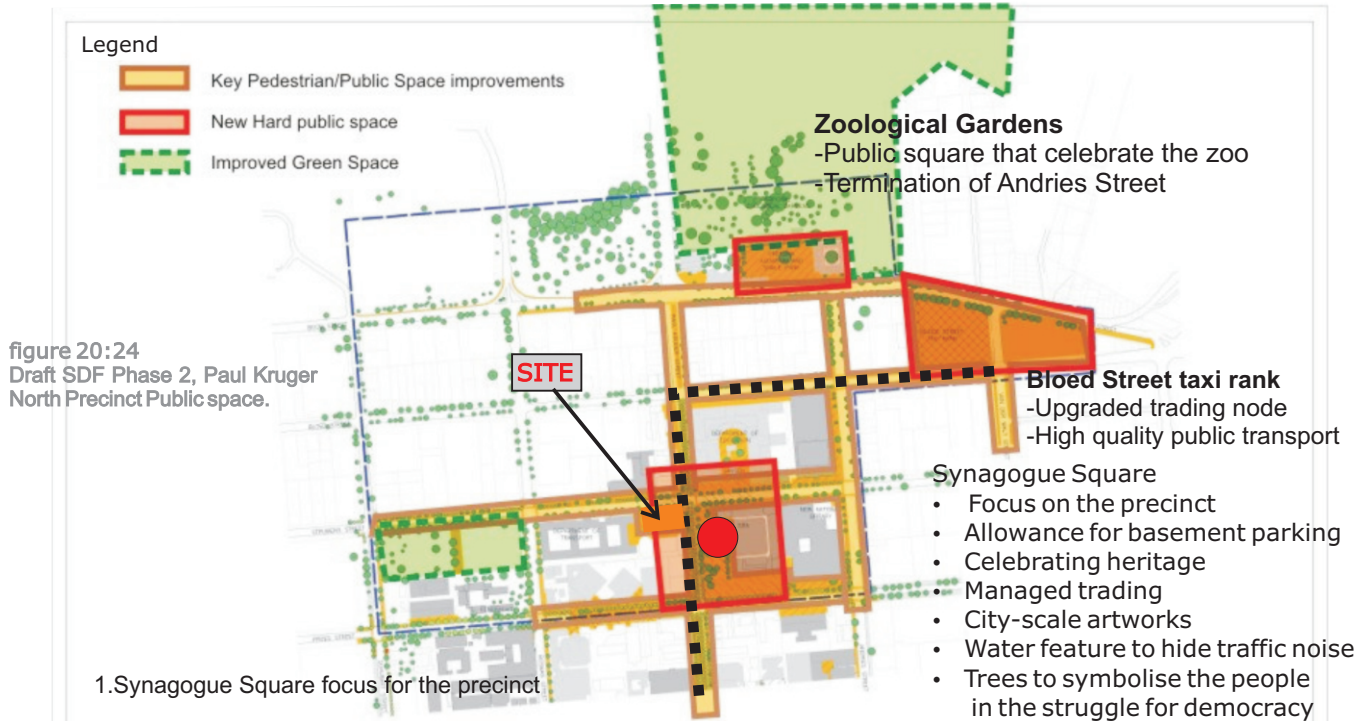
The Future

The Tshwane Inner City Spatial Development Framework by Gapp served as a precedent for the proposed renewal of the site for this dissertation. The project aimed to reinforce proposals made for improving the city of Pretoria's inner urban environment as proposed by Gapp. Aspects such as urban security, public spaces, and accessibility forms the backbone of their proposal.

The proposed site is included in the GAPP proposal as a public space forming part of the proposed Synagogue Square and will contribute to inner city renewal and rejuvenation.



Summary of the Paul Kruger North Precinct as developed by GAPP Framework proposal:



1. Synagogue Square focus for the precinct

2. Paul Kruger Street to be dedicated to public transport and to pedestrian movement

- Trading to be limited to between Proes and Bloed Streets
- Major negative impact on intersections in favour of pedestrians
- Integration of hard and soft spaces, i.e. transport facility and road
- Accommodation mostly Government
- New 295-bay parking facility on corner of Proes and Paul Kruger - allow for transfer station due to central location
- New ring road = Proes-Bosman-Vermeulen-Andries
- Preserve holistic quality: urban with vegetation
- Preserve buildings with architectural quality
- Preserve vitsas to heritage buildings

3. Pedestrian improvements to Proes (link to school grounds)

- Struben (Link to Library)
- Bloed (Link to Taxi Rank)
- Boom (Link to Zoo and to Belle Ombre)

4. Due to the lack of public space, all such space must be accentuated - school grounds must be multi-use and could be a flagship model for new-type schools that share their grounds with the city

Building guidelines:

- No highrises
- Ratio: 3-4 high / 1 wide
- Incorporate building into surroundings
- Allow for accessible courtyards